2013

Narrowing the Gap Between Imaginary and Real Artifacts: A Process for Making and Filming Diegetic Prototypes

Al Hussein Wanas
Virginia Commonwealth University

Approval certificate for Al Hussein Wanas for the thesis project entitled *Narrowing The Gap Between Imaginary And Real Artifacts: A Process For Making And Filming Diegetic Prototypes*. Submitted to the faculty of the Master of Fine Arts in Design Studies of Virginia Commonwealth University in Qatar in partial fulfillment for the degree, Master of Fine Arts in Design Studies.

Al Hussein Wanas, BFA In Graphic Design,
Virginia Commonwealth University in Qatar,
Doha Qatar, May 2011.

Virginia Commonwealth University in Qatar,
Doha Qatar, May 2013

_____

Diane Derr
Primary Advisor, Assistant Professor
Master of Fine Arts in Design Studies

_____

Patty Paine
Secondary Advisor, Reader, Assistant Professor
Liberal Arts and Science

_____

Levi Hammett
Secondary Advisor, Assistant Professor
Graphic Design

_____

Pornprapha Phatanateacha
Associate Director
Master of Fine Arts in Design Studies

_____

Allyson Vanstone
Dean
Virginia Commonwealth University in Qatar

_____

Dr. F. Douglas Boudinot
Dean
School of Graduate Studies
Virginia Commonwealth University

Narrowing the Gap Between Imaginary and Real Artifacts:
A Process for Making and Filming Diegetic Prototypes

A thesis submitted in partial fulfillment of the requirements for the Master of Fine Arts in Design Studies at Virginia Commonwealth University

by

Al Hussein Wanas
BFA in Graphic Design, 2011, VCU, Qatar

Advisory Board

Diane Derr
Primary Advisor, Assistant Professor
Master of Fine Arts in Design Studies

Patty Paine
Secondary Advisor, Reader, Assistant Professor
Liberal Arts and Science

Levi Hammett
Secondary Advisor, Assistant Professor
Graphic Design

Virginia Commonwealth University, School Of The Arts, Doha, Qatar, May 5, 2013

Keywords

Design Fiction
Diegetic Prototype
Critical Design
Micro-Narrative
Film Narratology
Psychoanalysis

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Abstract

Critical Design uses designed artifacts as a critique of consumer culture. However, the complex nature of these artifacts prompted designers to focus on the artifact and present it in an informative, but relatively isolated fashion.

The theoretical framework for this thesis is drawn from a similar, yet more recent, design criterion called Design Fiction. The artifacts of Design Fiction are called Diegetic Prototypes: fictional prototypes that function in the social sphere of a film's structure.

This research develops a method for analyzing and creating artifacts, in reference to psychoanalysis theories on the human psyche and perception of objects. It then explores scenarios for presenting these artifacts as diegetic prototypes by exploring and integrating the disciplines of systems/parametric design, digital fabrication, music, animation and film.

The scenarios function as micro-narratives. These micro-narratives created through the prototypes will inform the larger narrative structure of the film.

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1 ACKNOWLEDGMENTS

I would like to express my gratitude to VCUQ's Crossing Boundaries series for giving me the opportunity to listen to great speakers such as Bruce Sterling who introduced me to the field of Design Fiction. I also would like to thank the MFA department for hosting the wonderful field-trips I had in Amsterdam, Italy and Finland, where I was exposed to different art and design scenes.

I am grateful for my diverse board of advisors; Media Specialist, Diane Derr, for exposing me to Narratology and Critical Theory; Graphic Designer, Levi Hammett, for providing me with diverse material on Design; and poet, Patty Paine for exposing me to a multitude of literature on narrative.

I also would like to thank Peter Chomowicz for hosting many insightful speakers in our studio, and Paolo Cardini, Thomas Modeen and Benjamen Jurgensen for introducing me to the practice of prototyping and digital fabrication. I thank Richard Lombard for his invaluable insight on materials and design ethics, and Sarah Lauck for her practical insight on lighting and photography.

Thank you to Constantin Boym for his remarks on design practice, and Research Librarian, Michael Wirtz who was a great help in

facilitating the availability of my research books. Thanks to Michael Hersrud, Peter Martin and Law Alsobrook for their feedback on my work, Associate director, Pornprapha Phatanateacha, Associate Dean, John Guthmiller for constantly enriching this program's quality and momentum, and Dean Allyson Vanstone for making such a rare program available in the Middle East.

Finally, I'm grateful for my wife Zoë Shankle Donald, for her love and support, our families, and good friends and colleagues. I dedicate this work to aspiring filmmakers and designers in the field. And I hope this body of knowledge is useful.

3 INTRODUCTION

This research does not attempt to improve critical design, design fiction or filmmaking, but rather investigates a different method for critically designing diegetic prototypes. Drawing from Žižek's re-inscriptions of Lacan's theoretical frameworks on psychoanalysis through Hegel's dialectical methods, my method is an attempt at translating some of these complex theories into a design process. For the purpose of this research, the process I developed is used on three main projects and their derivatives. The prototypes are then presented in a short film using a similar framework for the narrative structure.

This research focuses on the quality of the outcomes rather than the quantity of prototypes and films generated by the methods. Evaluating quality through aesthetics is difficult as tastes vary and the interpretation is subjective to the observer. Alternatively, quality is observed through the coherence of the method applied by addressing all its components as proposed: the theoretical and the practical.

While drawing from different disciplines such as: psychoanalysis, narratology, product design and future technology research; my area of expertise is in graphic design and filmmaking. This research does not intend to extensively

elaborate on the other disciplines, but rather form new connections between existing knowledge and a new practice.

The design process of this research is not evenly consistent in every project, as the method in one project builds upon the criticism of its preceding project. All in all, this research observes an evolving method for designing artifacts and presenting them in film by re-contextualizing existing frameworks from different disciplines.

Finally, one can use a coherent framework to critically analyze and evaluate content effectively, however, the creative process is intuitive and spontaneous. But this spontaneity does not undermine critical analysis.

Although, theory can guide the practice, it cannot control the empirical results of experimentation. In other words, using a process for analyzing an interesting product through an insightful framework is not the same as using this framework to guarantee the creation of an interesting product. While both are organic in the sense that they're derived from human language, the former is a consistent algorithmic process derived from linguistics and the latter is an intuitive heuristic process. In that sense, methodology for creative practices can be challenging, yet it provides insightful knowledge into critically understanding ones' practice or emerging practices in design.

4 THEORETICAL CONSTRUCT

It is important to bear in mind that this research focuses primarily on film and design; the theoretical frameworks that are explored in this section are deployed for constructing a practical creative process. In view of this, the following writings are not an exhaustive literature review on critical theory, but rather an exploration of the development of written precedents.

4.1 RATIONAL: FILM AS A VIABLE PRODUCT OF CRITICAL DESIGN

Critical design is a term coined by Anthony Dunne and Fiona Raby. Similar in nature to critical theory, it uses "speculative design proposals" to challenge our preconceptions of products and their "role" in our "everyday life". It's considered a "position rather than a method". It's the opposite of "affirmative design that reinforces the status quo".[1] Hence, critical design uses objects as an embodied critique on "needs" for those who

1 Fiona Raby, "Critical Design FAQ," Dunne & Raby, n.d., http://www.dunneandraby.co.uk/content/bydandr/13/0.

consume or produce artifacts. More accurately defined as the "consumer society"[2].

Before discussing the viability of film as a critical design product, the rhetorical value of film needs to be viewed in different contexts. Viewed as a pragmatic tool; critical design that uses film as a medium to show consumer functions. Viewed as a poetic tool; film as a medium to illustrate critical theory. Viewed as a persuasive tool; film as a medium to critique the social system and persuade action. Finally, through a consideration of the tools above, an example of film as a viable product is discussed.

An early and important example of critical design shown through a time-based medium is "Technological Dreams Series: no 1, Robots" by Dunne & Raby (Figure 1). This project was published in 2007, and is now in the permanent collection of *MoMA, New York*, and *Fnac – Fond national d'art contemporain, Paris*.[3] It was also published in *Design and the Elastic Mind*, and *Talk to Me*. The premise of this project was to create objects that are meant to spark a discussion about how we'd like our robots to

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2 The quoted terms will be further elaborated in section 4.3.1. For a more in depth view, you can refer to Jean Baudrillard, For a critique of the political economy of the sign (St. Louis, MO.: Telos Press, 1981).

3 "Technological Dreams Series: No 1, Robots," Dunne & Raby, 2007, http://www.dunneandraby.co.uk/content/projects/10/0#.

Figure 1 Technological Dreams Series: no 1, Robots. 2007

relate to us. “Would they be subservient, intimate, dependent or equal?” [4] Respectively, four hypothetical robots were created to speculate on these relationships. The red ring, Robot 1, is “very independent”; the dark cone, Robot 2, is “very nervous”; the L-shaped block, Robot 3, is “a sentinel”; and the lamp shape, Robot 4, is “very needy”.[5] If the movie is watched, it is expected that the embodied critique becomes visible through the interactions that take place in that environment.

In this project, the film takes place in an empty white space with nothing but abstract sounds and sudden transitions. As a viewer, I see a non-linear development where a quiet lady dressed like a maid interacts with abstract objects. In this case, the film seems to be a medium to display a series of hypothetical objects in the future rather than a social reality that is relatable and identifiable. It is difficult to recognize a familiar human condition or as Žižek articulates it “the Jungian ‘symbols’ or New Age archetypes”.[6] Which are derived from ancient

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4 Ibid.

5 Paola Antonelli and N.Y.) Museum of Modern Art (New York, Design and the elastic mind (New York: Museum of Modern Art: Distributed in the U.S. and Canada by D.A.P./ Distributed Art Publishers, 2008), 28.

6 Slavoj Zizek, For they know not what they do: enjoyment as a political factor (London; New York: Verso, 2008), xii.

mythology, folklore and religion. A good example of this would be the common use of Joseph Campbell's literature on Jung's Symbolism and Mythology in the mainstream films such as: Star Wars, Harry Potter or Lord Of The Rings. In that sense, this poetic critique on the hypothetical object is counterbalanced with a designer's tendency to pragmatically focus on the designed object as an end in, and of, itself. By crossing out the poetic aspect (vague human-machine relationships) with the pragmatic one (film as a presenter of these vague relationships), what remains is a blank void of nothingness and confusion. In other words, the film medium does not aid in our reflection on the scenario through reality, but reinforces its vagueness.

Consequently, It would be difficult to understand what the project is critiquing or speculating on, without the textual description accompanying it. This is not to say that the project does not have a valid film language, but the significance of what the elements denote and connote is arbitrary to the average viewer. If the project is compared to contemporary narrative films, the objects and sounds do not resemble anything from a real life experience, and the actor is reduced to being a fifth robot without any recognizable human expression. If the project is to be viewed as a choreography of a body and objects, similar in nature to silent films, then one should refer to one of the pioneers in applied

psychology at that time, Hugo Münsterberg, "To the actor of the moving pictures . . . the temptation offers itself to overcome the deficiency by a heightening of the gestures and of the facial play, with the result that the emotional expression becomes exaggerated"[7] The deficiency in silent films is the absence of voice. However, compensation is attempted through an exaggeration of gestures and facial expressions; it might not fully remedy the defect, but it reduces it nonetheless. In the context of the project above, the defect is increased by its semantic and syntactic artificiality in the actor, the objects and the space. Hence, the meanings are misunderstood and the critique becomes transparent to a familiar language structure. However, apart from this "deficiency", the use of film medium in Technological dreams is a relatively more interesting and informative visualization as opposed to pictures alone.

The intent is not to devalue the discussed project or similar projects, but to explore the film medium and its potential in design. Although this project is more than half a decade old (2007), there are many designers today that still use the film medium to strictly document their work.

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7 Hugo Münsterberg, The film: a psychological study (Mineola, N.Y.: Dover Pub., 2004), 49.

In order to understand the value of film in critical design and vice versa, one needs to understand the value of film in the context of critical practice. An early example of this integration would be Guy Debord's film *La Société du Spectacle* (Figure 2 The Society of the Spectacle, 1973). In this film, Debord narrates from his earlier book, with the same title, in conjunction with scenes of consumer culture and mass media. In this sense the movie becomes more critical than the book, as the medium in question embodies the critique. Early in the movie he narrates "The spectacle is not a collection of images; rather, it is a social relationship between people that is mediated by images"[8]. A social relationship in the context of this quote is the "real unreality" created by the spectacle, which justifies and enforces "the conditions and aims of the existing system".[9] In other words, the spectacles are advertised needs that one does not need, but due to their omnipresence through mass media, one is deceived by the illusion of choice. But the reality is that the choice was already made for the consumer.

8 Guy Debord, Society of the spectacle (Detroit: Black & Red, 1983), 12.

9 Ibid., 13.

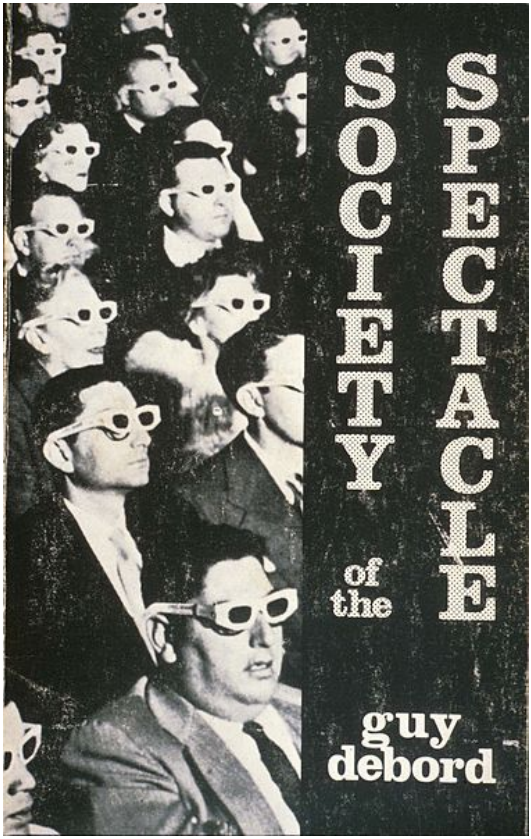

Figure 2 The Society of the Spectacle. 1973

However, Debord's rhetorical strategy was very literal to the point that it became a documentary of his writings, rather than a film with a different structure than the book. Similar to the designer, the writer focused on his discipline and used film only as a medium to pragmatically visualize his work.

Another rhetorical strategy that uses film and other media to critique consumer society is known as "culture jamming". Where "jamming" is based on the "CB slang word" in which "one disrupts existing transmissions".[10] In other words, it is the action of tampering with or interrupting the signal of the system, in this case, the mass media. The signals are the advertisements and the interruptions are the appropriations of these signals to create counter-advertisements. A famous example of a group that uses this rhetorical strategy would be the Barbie Liberation Organization (BLO). They started by purchasing hundreds of Hasbro's and Mattel's G.I. Joe and Barbie dolls from local stores, and then switched their voice chips. In effect, the new versions of Barbies acted like G.I. Joes and said, "Vengeance is mine", while the G.I. Joes acted like Barbies and said, "I love Shopping".[11] In 1993, shortly before

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10 Christine Harold, "Pranking Rhetoric: 'Culture Jamming' as Media Activis," Routledge Taylor & Francis Group 21, no. 3, Critical Studies in Media Communication (September 2004): 189–211.

11 Ibid.

Christmas, the dolls were returned to the stores to be sold to unaware consumers. The project received national press coverage, and in the following year they made a video in the form a television documentary, Titled "BLO Nightly News with Brian Williams" (Figure 3).

The video was created by combining a variety of actual media coverage of the BLO from the past with fictional segments of hacking instructions, in addition to a Barbie doll with a superimposed human mouth that spoke for the "right to exist" outside gender stereotypes. This collation of bulletins from major American news networks created the illusion that BLO made the headlines, when in reality it was a brief news segment. Vincent Bonin summarizes this process as follows, "The film allows us to measure the impact of a critical intervention in which the artist himself has supervised all the steps of post-production (modes of distribution, target audience, media coverage, documentation)"[12]

Here, the film was a viable product of critical design for a temporary period, as it blurred the boarders between reality and fiction, hence creating a dilemma of at least two choices of gender stereotypes. The objects become an embodied critique where questions and

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12 Vincent Bonin, "Igor Vamos (Troy, New York, United States)," Igor Vamos (Biography), n.d., http://www.fondation-langlois.org/html/e/page.php?NumPage=37#t1.

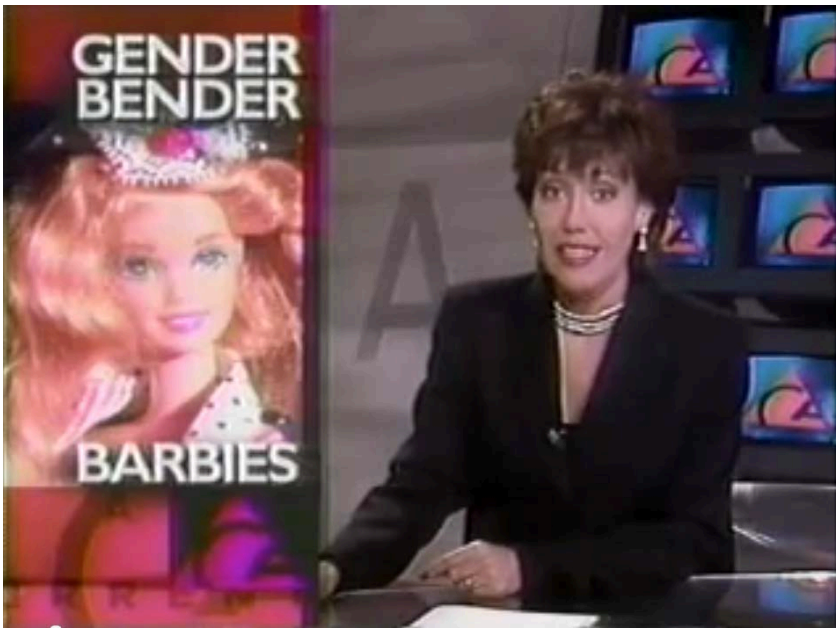

Figure 3 BLO Nightly News with Brian Williams. 1994

discussions on gender and media influence are raised. However, the objects then become too real as the consumer becomes capable of participating in the project by adding the voice chips. Instead, the intended critique on the fetishized object, created new consumer fetishism for modifying and tampering with the object. Over time, it no longer became a critique, but rather became a new culture of hacking for fun and acquiring the symbolic status of being underground heroes. Finally, the appropriation of an existing object, would fail to be effective once the object is no longer in consumption. Today, many girls prefer Bratz to Barbie and the intervention can lose its relevance once the doll becomes unknown.

From the three examples one can make the following observations. In the first example, if the film loses its connection to social reality, the language of its objects becomes unfamiliar and confusing. Second, if the language of narration takes over the film, the objects are enforced in the system of meanings that the narrator hypostatized, and they become detached from subjective interpretation.

Third, if the film addresses a particular object, such as: Barbie or G.I. Joe, over time, the critique disappears as we move away from the object. Briefly, in order for film to be a viable product of critical design it needs to have a balance between the reality and fiction of objects so as to maintain a social reality. It needs to balance between the poetry of objects and the semantics of objects in order to open a discussion. And finally, it needs to have an object that is not completely abstract or too real, in order to stand the test of time or have a longer life.

In order to create a film as a viable product of critical design, it is required to create a narrative experience that creates a "suspension of disbelief". Samuel Taylor Colridge coined the term, when he wrote, "my endeavors should be directed to persons and characters supernatural, or at least romantic, yet so as to transfer from our inward nature a human interest and a semblance of truth sufficient to procure for these shadows of imagination that willing suspension of disbelief for the moment, which constitutes poetic faith."[13] Considering the three examples above in the context of this quote, none of the projects had the element of supernatural or romantic characters

13 Samuel Taylor Coleridge, Biographia literaria, or, Biographical sketches of my literary life and opinions (Princeton: Princeton University Press, 1984), 314.

except the BLO video project. However, the romance is eradicated once the dolls are manipulated by, and accessible to, the masses.

In an ideal scenario, the human interest and semblance of truth is generated from a romantic or supernatural thing that can be translated to a symbolism of familiar archetypes. Then it becomes familiar to ones' reality. The experience with this familiar yet romantic reality creates an awareness of existing meanings of the actual reality, as the meanings become deconstructed through fiction. This familiarity and overlap creates a suspension of disbelief and drives the mind to imagine and dream of different possibilities or alternative realities. Having this active mind and poetic faith for change, is sufficient for creating a viable product in the context of critical practice. As the goal of critical design is to raise questions and engage discourse; the discussion can then have the potential to practically influence our future world.

Though the three examples above do not fully articulate the flexibility of film, it needs to be considered that critical design is less likely to succeed in creating an experience for a larger audience without an effective agency for experience. In case of the first project, the artifacts were too abstract to create this semblance of truth. In the second project, the artifacts were forced into the truth of the narrator and hence one is left with nothing to procure from these shadows of imagination, since the truth was an answer instead of a question. In the third, the artifacts became too real and left is nothing for constituting the poetic faith.

The film medium in all of the three scenarios had different target audiences and desired outcomes. Due to this, film can reach both ends of the real/unreal experience spectrum indirectly. This balance between reality and illusion is best articulated by Jean Baudrillard writing about Holograms, "It is the fantasy of seizing reality live that continues—ever since Narcissus bent over his spring. Surprising the real in order to immobilize it, suspending the real in the expiration of its double . . . the day when your holographic double will be there in space . . . you will have realized this miracle. Of course, it will no longer be a dream, so its charm will be lost"[14]

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14 Jean Baudrillard and Sheila Faria Glaser, Simulacra and simulation (Ann Arbor: University of Michigan Press, 1994), 105.

Once the charm is lost, there is no trigger for having poetic faith. "Charm" is a difficult term to define, but in this context, charm is the act of showing another side of something that is not as familiar when compared to how it's perceived naturally, commonly or frequently. A good example to illustrate this would be Noam Toran's *Accessories for Lonely Men*[15], (Figure 4). The "charm" in this example is the use of simple objects to deconstruct complex elements in a relationship between two partners. The objects do not serve a functional purpose in the real world, but they function as a trigger for discussing the facets that build up a relationship.

Conversely, critical design alone with the mechanics of physical interaction can pollute the experience and the embodied critique as different assumptions of how to interact with particular artifacts are made. Furthermore, the physical presence of artifacts can be devalued through poor materials, technology limitations or compromised interaction mechanisms (such as the first example that was discussed).

Alternatively, in film most things can be visually orchestrated towards the a less compromised aspiration for the proposed alternative reality. In addition, film becomes

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15 Noam Toran, "Accessories for Lonely Men," Noam Toran: Accessories for Lonely Men, 2001, http://noamtoran.com/NT2009/projects/accessories-for-lonely-men.

Figure 4 Accessories for Lonely Men: Heavy Breather, by Noam Toran, 2001

capable of engaging an audience, as it can act as the social context of a fictional artifact. This phenomenon is further elaborated in "design fiction"[16] where the artifacts act as "diegetic prototypes" [17] that function in the social context of the film. In kirby's words, "The performative aspects of prototypes are especially evident in diegetic prototypes [prototypes that function in the narrative structure], because a film's narrative structure contextualizes technologies within the social sphere. Narratives in popular cinema require certainty from their technological devices to move their stories forward"[18]

A good example of a film that illustrates "diegetic prototypes", is 2001: A Space Odyssey. A prominent figure in this design criterion is Julian Bleecker, designer and researcher at Near Future Laboratory. He eloquently articulates the relationship between speculative design and film in his publication on design fiction, when he remarks on the film 2001: A Space Odyssey, "The film is perhaps most effective for its uncanny ability to make the future legible to the audience, at least insofar as it created indexical references to

16 Julian Bleecker, "Design Fiction: A Short Essay on Design, Science,fact and Fiction." (Near Future Laboratory, March 2009).

17 David Kirby, "Future Is Now: Diegetic Prototypes and the Role of Popular Films in Generating Real-World Technological Development. Social Studies of Science," 2009.

18 Ibid., 45.

familiar, quotidian bits of 1960s culture as projected into the year 2001"[19] However, in referencing the 1960s, the film was not limited to the existing technology during that time period. In a time where a computer was the size of a room (Figure 5), visualizing an idea like the Atomic Pen would seem a fantasy, especially a nuclear powered pen with an "integrated miniaturized nuclear reactor". This technology "automated the writing process by allowing the user to write in any imaginable language, any format and in any possible color"[20]. (Figure 6)

Today this product is viable when one thinks about advanced motion sensing input devices, optical character recognition and multilingual machine translation technologies. However, during that time period when Marshall McLuhan's hypothesis "the medium is the message" was widely discussed, "Kubrick certainly did not question this assertion, however, he perforated it to the extent that he did not show the boxes and containers with their cables, connections and plugs".[21] By doing so in a time when these artifacts were the medium of technology and by focusing only on the message,

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19 Bleecker, "Design Fiction: A Short Essay on Design, Science,fact and Fiction.," 23.

20 Volker Fischer, "'Designing The Future: On Pragmatic Forcasting in 2001: A Space Odyssey' Stanley Kubrick," in Kinematograph Nr. 20 (Dt. Filmmuseum, 2007), 113.

21 Ibid., 112.

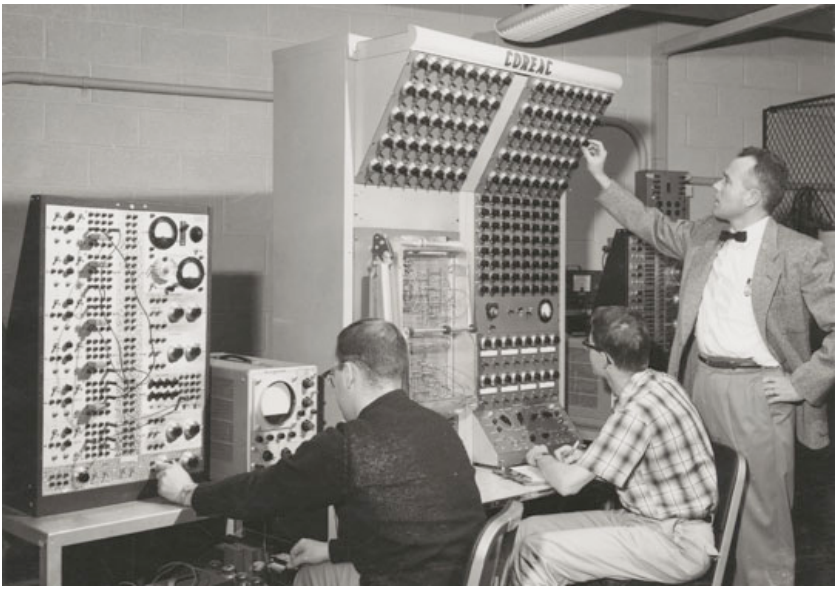

Figure 5 The First Cornell Electronic Analog Computer (COREAC), 1960

Figure 6 Atomic Pen by Parker Pen Company, 1965

the visual "interface" and "information", not the technical details of function in that time period, Kubrick's movie was an effective agency for suspending disbelief.

As Discussed earlier, creating a suspension of belief requires a semblance of truth into that romantic or supernatural artifact. In Kubrick's film, the average telephone during that time was a sufficient trigger for suspending disbelief on the Picture Phone in the context of the movie (Figure 7).

The mentioned prototypes, among many others, in Kubrick's movie were diegetic prototypes, but they were functioning in a narrative that was contextualized in the social reality of its time, the 1960s. Hence, having a higher rhetorical advantage.

A diegetic prototype would not make sense to an average viewer if one were to view a movie such as Mathew Barney's "The Creamaster" where the social contexts and artifacts are abstracted. As a surrealist film, it becomes an interesting deconstruction of symbols and ideologies, but it fails to constitute poetic faith, or in Baudrillard's words, "fictional anticipation"[22] into something that is relevant to everyday life. This affinity towards the real is best articulated when Baudrillard wrote, "It is no longer possible to fabricate the unreal from the

22 Baudrillard and Glaser, Simulacra and simulation, 122.

Figure 7 Picture Phone, 1965

real, the imaginary from the givens of the real. The process will, rather, be the opposite: it will be to put decentered situations, models of simulation in place [diegetic prototypes] and to contrive to give them the feeling of the real, of the banal, of lived experience of the quotidian, [social context] but reconstituted, sometimes down to disquietingly strange details, reconstituted as an animal or vegetal reserve, brought to light with a transparent precision, but without substance, derealized in advance hyperrealized."[23] It is in these "strange details" that an aspired object is degraded to the banality of everyday life and becomes relevant. Zizek elegantly articulates it as "the simple narrative reality of a film vs. the film's virtual texture & micro-signs".[24] It is in this context that I define the micro-narrative; more elaborately discussed in the following section.

23 Ibid., 124.

24 Slavoj Zizek, Slavoj Zizek: The Reality of the Virtual, Documentary (Ben Wright Film Productions, 2004).

4.2 TERM: MICRO-NARRATIVE

The terms macro and micro were used in many ways to describe structures. The term micro-narrative was used in different ways to describe a phenomenon of experience in the context of films, games, literature or other types of information and entertainment media. The definition varies according to different contexts and many consider it a neologism for articulating a phenomenon in their discipline. The ubiquity of this term gives it the flexibility to be articulated in a variety of ways.

In 1895, the one-minute short film, *La sortie des usines Lumière* (Figure 8), which consisted of a single shot of the workers leaving the Lumière Factory, was depicted as a "micro-narrative".

"They are not yet 'narrating' in the proper sense of the word, but by only showing they both create a sequence of photographic images and capture the movement. This form of showing suffices for Gaudreault as the basic criterion for a (micro-) narrative."[25] In referring to Gaudreault original definition, "There are two types of narrative in the cinema: the micro-narrative (the shot), a first level on which is generated the

25 Peter Verstraten and Stefan van der Lecq, Film narratology (Toronto; Buffalo, N.Y.: University of Toronto Press, 2009), 15.

Figure 8 Employees Leaving the Lumière Factory, 1895

second narrative level"[26]. The shot in the context of this definition is the narrative unit that constitutes the larger narrative structure. However, a shot might contain a series of images, sounds, actions, a monologue or a dialogue and other relationships in the form of transitions or continuity between all these elements with preceding or following shots. Hence it would be difficult to highlight the structure of this narrative unit and use it as a theoretical module for comparing other narrative units, as they already reach a second level of narratives in their own right.

In game design, the definition of the micro-narrative is more concerned with the "emotional experience" of the player. In reference to Henry Jenkins, "Micronarratives may be cut scenes, but they don't have to be. One can imagine a simple sequence of preprogrammed actions through which an opposing player responds to your successful touchdown in a football game as a micronarrative". In other words, the micro-narrative is manifested through emotional scenes or experiences that are triggered in response to players' interactions. Such as the "sense of speed in a racing game . . . or the sudden expanse of sky in a snowboarding

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26 André Gaudreault, "Film, Narrative, Narration: The Cinema of the Lumière Brothers." Early Cinema: Space, Frame, Narrative, ed. Thomas Elsaesser (London: British Film Institute, 1990), 71.

game"[27] However, this definition blurs the boundaries between at least two major fields: the phenomenology of experience and the science of narrative. If the narrative units were to be looked at as emotional triggers, then one would expect that the emotional triggers could be articulated into narrative units. Apart from the archetypal perception of emotional triggers, emotions and experiences vary subjectively in different contexts. This variability of triggers can distort the dimensions of the proposed narrative unit and turn it into a randomized structure that does not formalize into a consistent method, in this case, for designing games.

The term micro-narrative is also used in education, programming, literary theory, and other disciplines when referring to macro or grand narratives or structures. Many users of this term use it as a structural component in order to identify a particular phenomenon in their discipline. My aim is not to identify, but rather hypothesize on what the micro-narrative seems to be.

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27 Henry Jenkins, "Game Design As Narrative Architecture" First Person: New Media as Story Performance, Game, ed. Noah Wardrip-Fruin and Pat Harrigan (Cambridge: MIT Press, 2004).

In the context of this research, the micro-narrative is close to Zizek's postulation on "the film's virtual texture and micro-signs".[28] It is useful to note the term "texture" suggests an organic irregularity, yet an overall consistency of variables. Not to be confused with the modular integration of emotional triggers and narrative units or "the shot" mentioned earlier. This definition is concerned with the organic morphology of the micro-narrative, while the former definitions are concerned with the modularity of the micro-narrative as a programmable entity in the syntax of a larger narrative.

Zizek gives an example of the "virtual texture" through a musical "The Sound Of Music", which is a film that took place in 1930s Austria. In his narration he states "At the level of simple narrative reality, we get one message: the democratic resistance against Nazism. But at the level of, let's call it, virtual texture . . . we get practically the opposite message, which is: honest fascists resisting decadent Jewish cosmopolitan take over . . . This is at least one of the reasons of why this movie was so extremely popular . . . by officially agreeing with our democratic ideology, it at the same time addresses our secret fascist dreams "[29] In my opinion, the third layer of

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28 Zizek, Slavoj Zizek: The Reality of the Virtual.

29 Ibid.

narrative was created through this contradiction of ideologies, this third layer or the "virtual texture" of the film, adds depth to the narrative. In the context of virtual textures, antithesis is key.

However, not every contradiction or antithesis could add depth to the narrative. It is important to have a framework in order to create an effective antithesis; otherwise the outcome would be self destructive and meaningless. An example of a bad antithesis would be a pencil sharpened from both ends. This visual contradiction of a pencil's function does not encourage us to synthesize a third layer of deeper meaning or interpretation; the pencil still functions in the realm of pencils and does not open for us new doors for discussion on the object and its existence in a larger context.

In that sense, the micro-narratives, as defined in this research, are series of small antitheses in the narrative. The reason it is micro is because it manifests itself through objects that do not have importance in moving the plot or the story forward. The reason it is important relies on how these objects individually or collectively encourage the spectator to synthesize a third layer of narrative depth outside the main context of the story. These objects are not plot devices and are not be confused with what Alfred Hitchcock defined as the "McGuffin" which is a plot device that moves the story forward, such as: the object

"Maltese Falcon" or the space "Matrix" or other treasures or places that the protagonist is after. [30]

Examples of a micro-narrative would be the plants in Léon: The Professional, or the "real" food in The Matrix, or the Lembas bread in Lord of the Rings (Figures 9 -11). All these objects do not directly contribute to the progression of the story, but add more depth to its narrative.

These objects that manifest the micro-narrative are primitive and banal in nature, however they form an effective antithesis that raises interesting questions on the characters and their behaviors in the story. For instance, Léon, the dangerous assassin that takes good care of his plant at home, or Neo, the one, who eats the colorless, odorless, tasteless food after his "enlightenment". From a wider perspective, the objects are primitive because they are closer to reality and act as an antithesis to the fantastic narrative. If we look at a story as a planar surface where the protagonist moves from point A to point B, and the plot as the obstacles or rewards that the protagonist encounters; the micro-narratives would be the factors that affect the subtle topology, colors and textures of the story plane. These subtleties affect how the character walks through the narrative plain in a certain mood or posture. The story no longer becomes an

30 "McGuffin," Oxford Dictionaries, n.d., http://oxforddictionaries.com/definition/english/McGuffin.

Figure 9 Léon: The Professional, killer taking care of plants

Figure 10 The Matrix, eating artificial food substance for nutrition

Figure 11 Lord Of The Rings, Elf taking a bite from Lembas bread to prepare for a long journey

abstract plane, but gets closer to becoming a representation of a real landscape. It is the difference between walking through an empty corridor without doors and through one with doors, they are both empty, both can be visualized but the latter shows more spatial possibilities even if they're not explored.

Here we can find the opportunity for implementing this phenomenon of the micro-narrative on critical design. As these artifacts can be presented effectively in film as diegetic prototypes. Yet, one is tempted to question the difference between these objects that manifest the micro-narrative and regular objects that the characters interact with in the story, considering that they are both diegetic. Furthermore, recognizing the subliminal power of objects is already an elementary aspect of storytelling, so where is the distinction between the two? Wouldn't a simple film documentation of these objects suffice? Briefly, some bear strong antitheses and others bear weak ones. From this point, it is needed to analyze the object from the discourse of psychoanalysis, specifically Lacan's triad: Real, Imaginary and Symbolic. This is an essential framework to understanding the language and function of these objects in the context of a larger narrative and how to design these diegetic objects/prototypes as micro-narratives.

4.3 PRECEDENTS: THEORY IN PRACTICE

To invest time and emphasize importance on the film medium in the same rigor that one invests in the design medium can be challenging unless there is a consistent framework that could be applied to both of these disciplines. The following sections will highlight theoretical frameworks that will be translated into a design and filmmaking process. We'll first begin with discussing psychoanalysis, then the idea of diegetic prototypes.

In the psychoanalysis section, we look at common structures for analyzing the human psyche and the rational for using these structures to analyze the process of creating objects. Then we show examples of how these frameworks of psychoanalysis were used in film through the Diegetic Prototypes section.

4.3.1 PSYCHOANALYSIS

The Real, Imaginary and symbolic are the basic elements of Lacan's triad. They are the development of Freud's ID, Ego and Superego, respectively. The definitions and discussions of these psychological junctions are drawn from Zizek's philosophical re-inscriptions of Lacan's framework.

Prior to this investigation, we need to understand the difference between a subject and an object in the context of philosophy. In very simple terms, an object is an entity from the multitude of entities that constitute our world. Everything we can perceive or experience is considered an object. An object could be as simple as a rock or as complex as our reflection in the mirror. Then we have the subject, which is the perceiver of these objects. Hence we have the terms Subjective (more inclined towards the interpretation of the subject and relates to ideology) and Objective (more inclined towards the interpretation of the object and relates to reality). But how can we know if the interpretation of the subject is actually more realistic? or know if the interpretation of the object is actually more idealistic?

There is no right or wrong answer for these questions, but there is a comprehensive discourse on the question of Subject and how it perceives Objects. Many disciplines in critical theory such as: philosophy, sociology and psychoanalysis, explore these questions. But as a designer, I'm concerned with making objects for subjects (subjective needs). It can be a need to choose between a spoon or a fork, or a need to choose between reading a book or watching a movie. For example, a bowl of soup stimulates my need to use a spoon instead of a fork and a library space stimulates my need to read a book instead of watching a movie. In many cases, structure is often used in design for visual or instructional purposes, and rarely as a philosophical tool that serves intellectual stimulation.

In psychoanalysis, many of its pioneers such as: Sigmund Freud, Carl Jung, Jaques Lacan and more recently Slavoj Zizek explore the Subject and Object through structures. In this research we'll explore the development of Sigmund Freud's structure through Lacan and Slavoj Zizek and implement it to the process of design.

If we briefly describe Freud's ID, Ego and Superego: ID would be the part of our psyche that is concerned with our basic instinctual needs and the satisfaction of those needs, it is the primal beast inside us. The Ego is the part that tries to satisfy our ID's primitive needs in a socially

acceptable way. Finally, we have the Superego, which is the part that is responsible for our conscience of authority and society. This conscience of authority influences our Ego to compromise the primitive needs of the ID. That compromise creates a conflict between the Ego and the ID. The conflict splits the Ego into two parts, the Ego Ideal and the Ideal Ego. The Ego Ideal is concerned with the person's desire for being the idealized figure in society (to satisfy the Superego). The Ideal Ego is concerned with the one's desire to be the idealized figure of one's self (to satisfy the ID). This dichotomy opens many doors for questioning the status quo through art, literature, design or any creative input that can suspend our disbelief in the change of present ideals.

Alternatively, Lacan describes these three components as Real, Imaginary and Symbolic, which respectively correspond to Freud's ID, Ego and Superego. Lacan's most notable contribution was his theory of "the mirror phase". Briefly, the ego is formed once the infant identifies with an external image; once the infant sees its own reflection on the mirror it forms self-identification. These two types of identification (external / self) correspond to Freud's Ego (ego ideal / ideal ego), which in Lacan's terms is defined as the Imaginary (Other, other or objet petit a). All these structures for analyzing ideology are forms of objectifying entities we

experience in the world. Through these frameworks, our consciences are objectified and analyzed. Hence, this formalization allows more flexibility and opportunities for applying or re-inscribing the theory into different disciplines. But how can this structure be applied to design? When one thinks about design, one also thinks about utility, and consequently, once an object becomes useful, it becomes a commodity. As mentioned earlier, an object can be something as complex as our reflection in the mirror.

Slavoj Zizek remarks on the interesting connection between Marx's commodity and Freud's "Dream-work" when he refers to critics of the Frankfurt School in his book, The Sublime Object of Ideology, "It is not just a question of seeing things (that is, social reality) as they 'really are', of throwing away the distorting spectacles of ideology; the main point is to see how the reality itself cannot reproduce itself without this so-called ideological mystification. The mask is not simply hiding the real state of things; the ideological distortion is written into its very essence."[31] In other words, this ideological mystification distorts the "true" function of an object, but this distortion is not a mask or a façade for the object, as it plays an important role in constituting the function of the object itself. In this sense, the latent ideological component of an

31 Slavoj Zizek, The Sublime Object of Ideology (Verso, 1989), 28.

object dictates what form an object takes. The conspicuous consumption of an object is influenced by this latent ideological component. This could seem obvious, but it becomes interesting once this understanding of objects becomes the ground for analyzing objects through the framework of psychoanalysis.

Given this understanding we can see the strong affinity between Subjects (perceivers) and objects (entities perceived). In effect, objects play an important role in constructing one's ideology and this dichotomy between one's opposing authorities and personal needs creates the opportunity to question the current ideology. It then becomes a question of what the object could have been? Or what will the object be? In order to address these questions effectively, we need to consider the structure of the psyche through the theoretical frameworks mentioned above.

In the following section, we'll look an example of how psychoanalysis was used in creating an architectural space for the main character of Alfred Hitchcock's "Psycho". We'll see how the framework of Imaginary, Symbolic and Real was applied to construct the form and the narrative of this space.

4.3.2 DIEGETIC PROTOTYPES

The word diegetic is a derivative of the word diegesis, which is originally a Greek word that means "narrative"[32]. It's a word typically used in film and fiction vocabulary. In the context of narrative, any element, which exists in a story, is considered diegetic.

The characters, the environments, the sounds, and the things that are experienced in a narration of a story are diegetic. In this sense, diegetic prototypes are objects that function within the context of a fictional environment.

The objects designed for fictional narratives could be as deeply scientifically driven and justified as Stanley Kubrick's 2001: A Space Odyssey or as deeply psychologically driven and justified as Alfred Hitchcock's Psycho. Between those two extreme examples are films such as: Minority Report, The Matrix, Star Wars, Iron Man, and so on.

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32 "Diegesis," Oxford Dictionaries, n.d., http://oxforddictionaries.com/definition/english/diegesis?q=diegesis.

I've found Zizek's analysis of the film Psycho particularly intriguing as he related Freudian psychoanalysis to the structure of the house beside the motel. The house had three floors: basement, first floor, and second floor, which respectively correspond to ID, Ego and Super Ego. The basement (ID) is where the character engages in chaos and violence, the first floor (Ego), is where the character appears to function as a normal person, and the second floor (Super Ego), is where the character is confronted with a higher authority (his mother).[33] In the following sections I will show how the above framework for analysis could be used as a framework for a creative design process.

33 Slavoj Zizek, The Pervert's Guide to Cinema, Documentary (Lone Star Productions, 2006).

4.4 PROJECT NULLA:

Nulla is greek for nothing or zero. This project is only concerned with visual structure and the aesthetic possibilities that emerge as a result of using consistent visual structures to inform the design and construction of the work.

4.4.1 RATIONAL

The purpose of this project was to create a visual identity for my work, while avoiding biased aesthetic decisions for the designs.

4.4.2 CONCEPT

This creative process starts with constructing a prejudice from something that does not make any sense semantically or stylistically, but works syntactically.

In the case of this project, a geometrical system is used to construct different elements that guide the creation of objects, music and the final film. The goal is not to create good music, objects, films, but honest biases towards unfamiliar structures. In other words, an unknown truth might seam uncomfortable or unusual but it doesn't matter so long as it stays faithful to its structure.

This faithfulness gives it coherence regardless of how subjective the interpretation would be. The idea is to go along the same line of using structures to analyze the human psyche such as the triad Real, Imaginary and Symbolic. This triad structure was used to analyze and construct meaning for subjective human behaviors. In a similar way, the visual structures that are developed for this project are used to analyze and construct an aesthetic direction for the creative process.

4.4.3 SYSTEM

The system will be used to create and visualize most of the elements in this research: from theoretical frameworks, to prototype designs to music and film production. Figure 12 illustrates the visual system. The system is based on circles due to their visual flexibility in creating variable shapes and forms, as illustrated in the practical synthesis section.

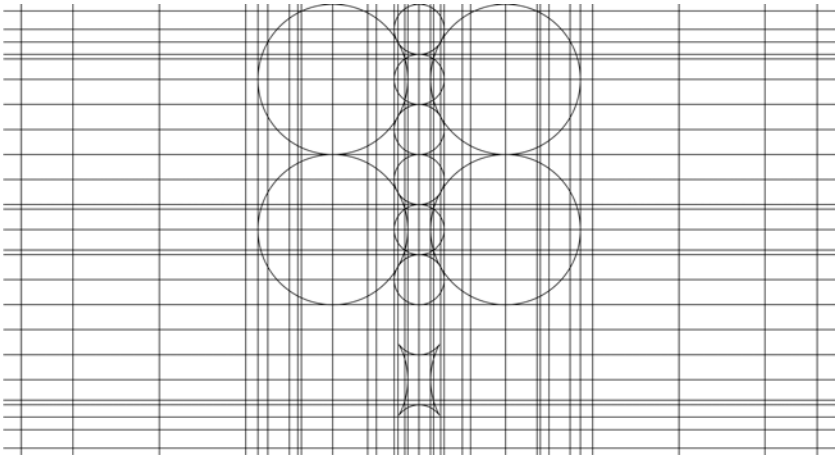

Figure 12 Project Nulla: A simple yet complex circle system used for visualizing designs.

5 PRACTICAL SYNTHESIS

5.1 DESIGN

The process is straightforward and has been repeated multiple times to create a variety of designs. Lacan's triad, Imaginary, Symbolic and Real has been used as a structure to guide the design process. The following figures will illustrate the structure and how it's translated to design. Once the structure is identified in terms of how it will be used in the design process, a series of templates would be created based on the hypothesis and will be tested out to generate ideas. After the ideas are generated, they're prototyped for testing the scenario, then redesigned through the visual system. This is an attempt to avoid an aesthetic choice that is influenced by the general perception of the object. The following figures illustrate the process of visualization.

Every project explores Lacan's Triad Differently to generate ideas and each project is visualized differently through the same visual system, but with an alternative application to a different design discipline. (i.e. Graphic, Fashion, Interior, … etc.) The structures are simple to define, yet they are challenging to address. (See Appendix 3 for more detailed processes on the toothbrush prototype.)

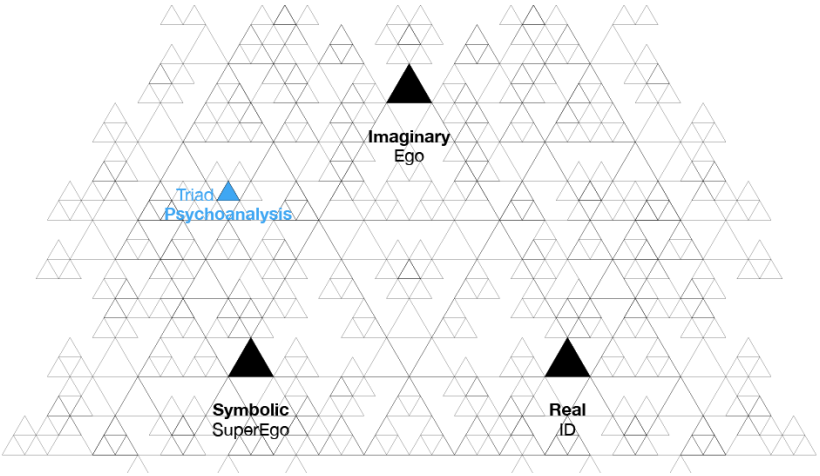

Figure 13 Lacan's Triad of Psychoanalysis juxtaposed with Freud's Triad of Psychoanalysis

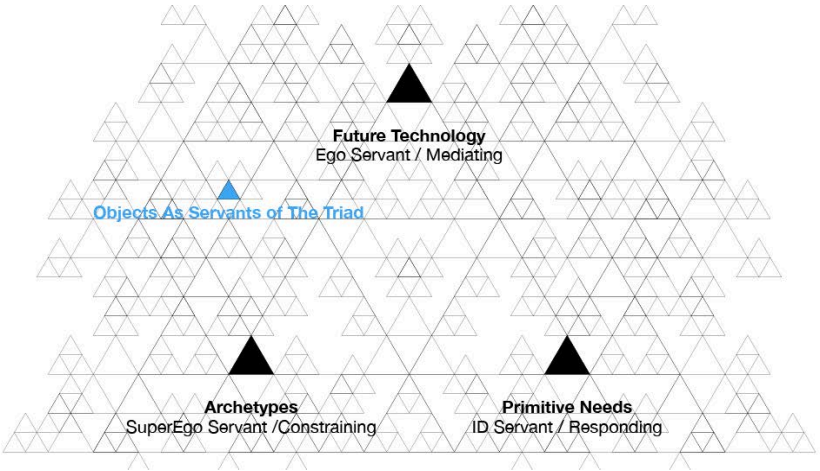

Figure 14 Elements of Lacan's Triad in relationship to how they are translated in the context of this research

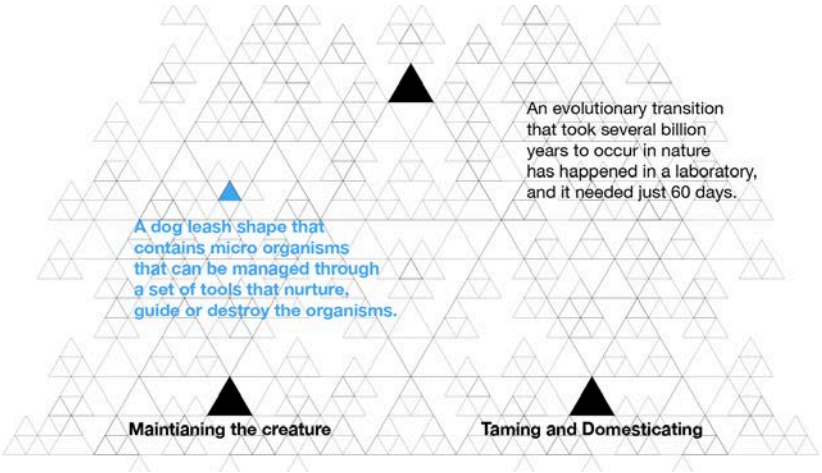

Figure 15 An example of using Lacan's Triad of Psychoanalysis to propose a design idea

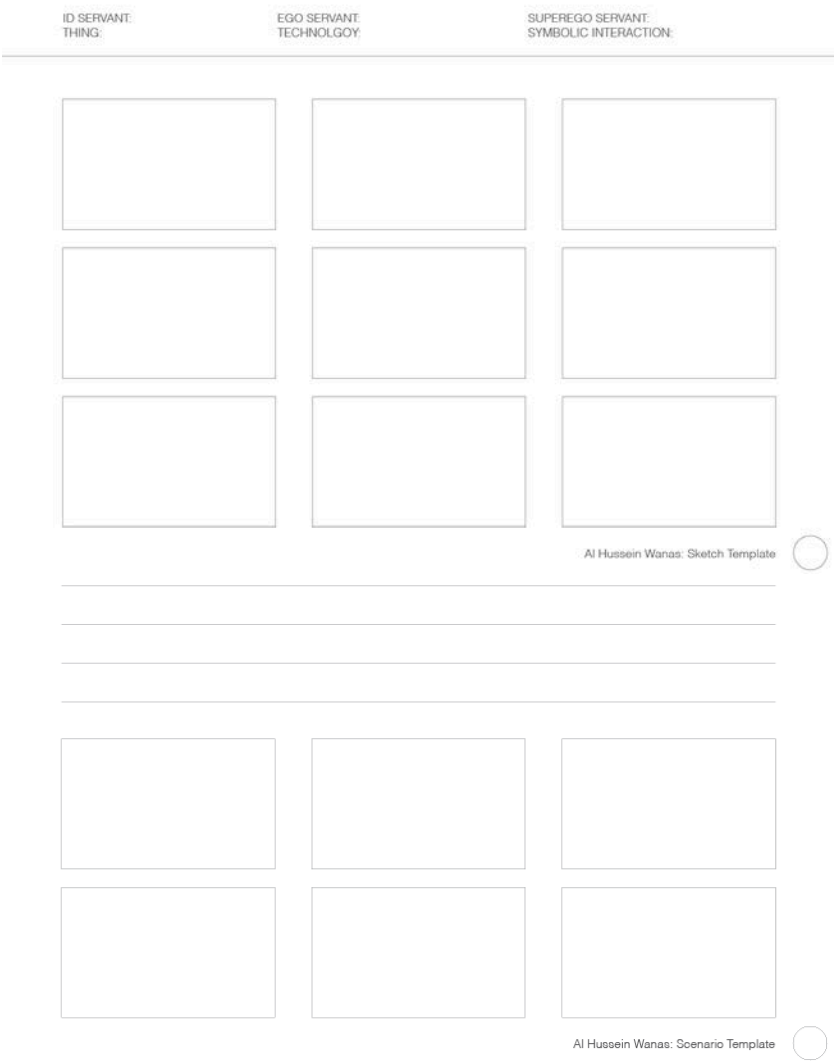

Figure 16 Templates were designed for the purpose of sketching ideas based on the structure described in the earlier figures

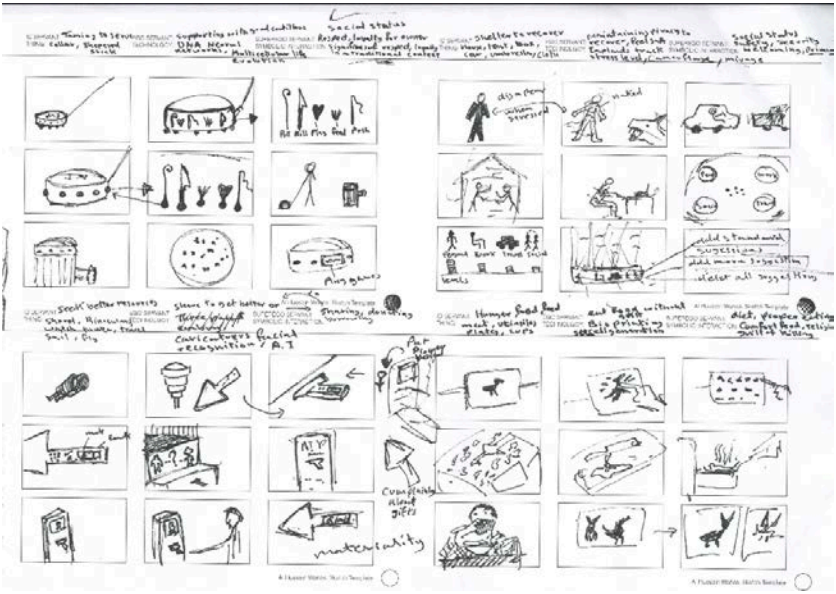

Figure 17 An example of four scenarios designed based on the template developed earlier.

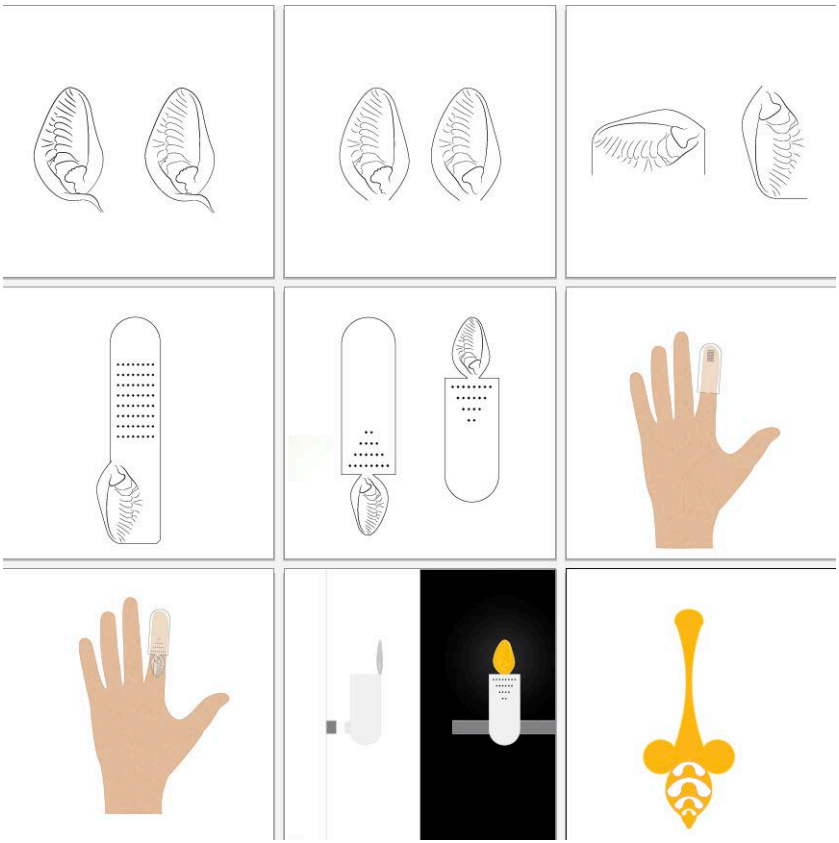

Figure 18 The visualization process starts with literally taking the important elements together then gradually transforming their physical appearance and aesthetic through using the visual system in project Nulla

Figure 19 Different materials are explored to see the limitations and advantages for developing the prototype according to the planned construction.

Figure 20 A very rough and simple prototype is then developed to test the scale and function of the prototype

Figure 21 The prototype is then handled and used to test and see how it works visually on a screen.
A better way to describe this would be to call this phase a "Mise-en-scène" test.

Figure 22 The object is then considered for further modifications in the final construction plan

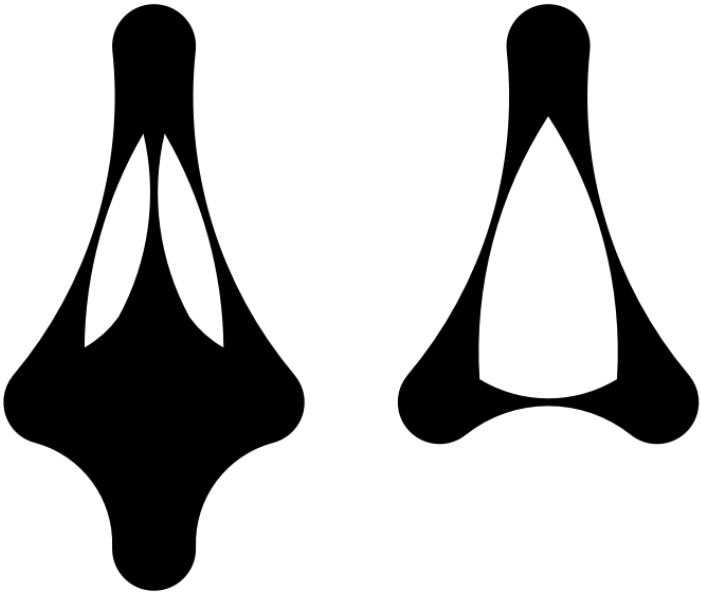

Figure 23 After knowing the functional and physical aspects of the prototype, it is then reconstructed again through the visual system (project Nulla), while considering the modifications and measurements from the earlier tests.

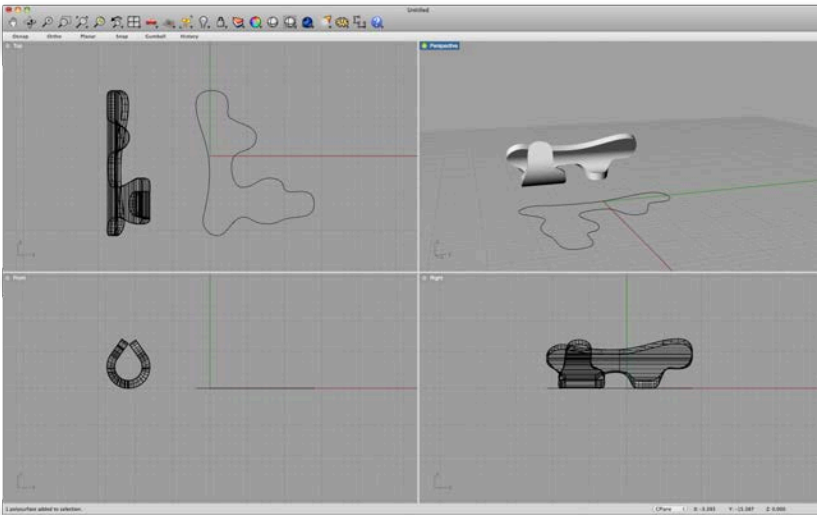

Figure 24 If the object is three dimensional, the plan is tested and iterated upon in a 3D space to see which plan translates better into the physical medium.

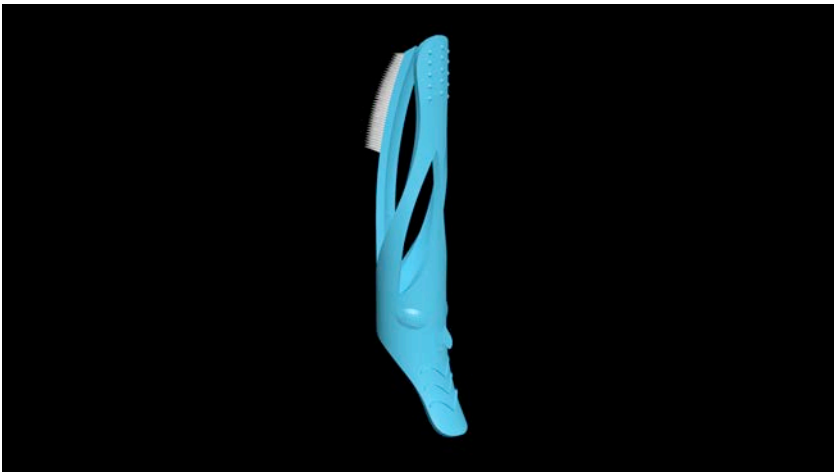

Figure 25 After the model is developed, it is then checked for technical issues regarding construction methods which vary from 3D printing, laser cutting, vacuum forming, wood working, molding or other methods.

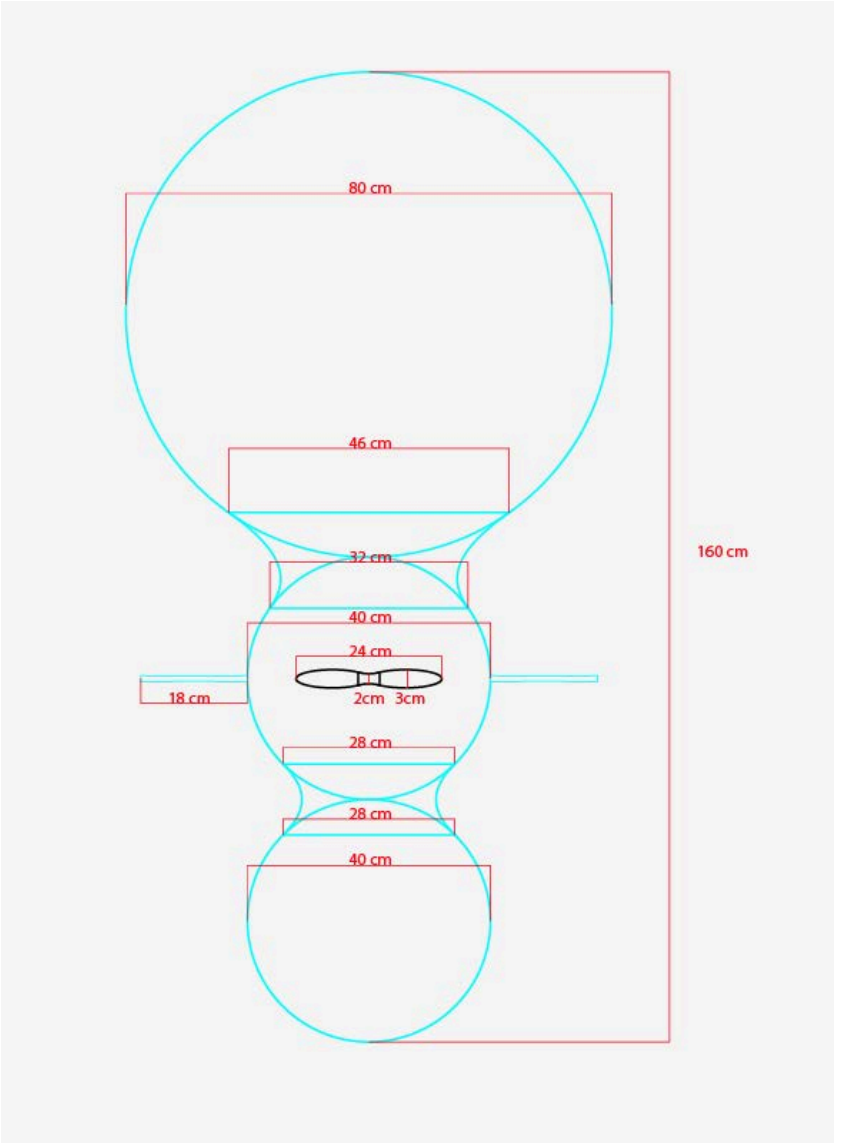

Figure 26 The process is repeated for every object. This figure is a construction Plan of Female Head Cover "Niqab"

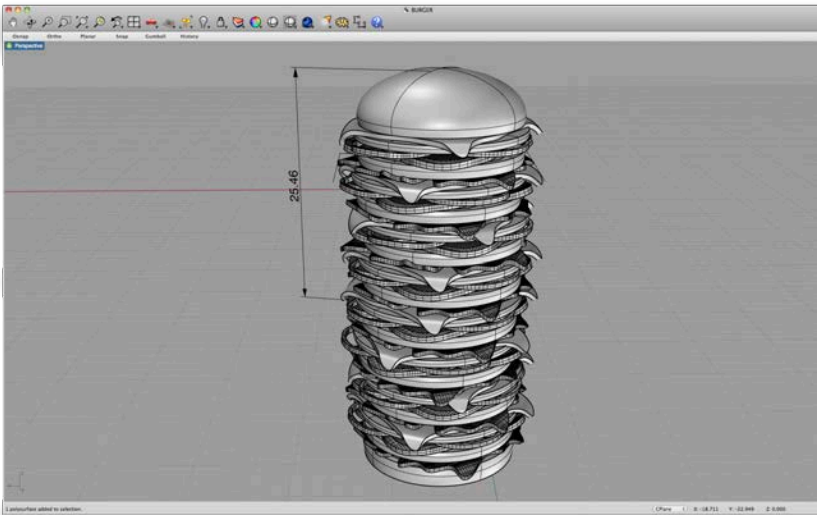

Figure 27 Micro Burger (A future speculation on recycling symbolic elements in food) Checking for technical issues in 3D printing when different layers of the burger are not connected.

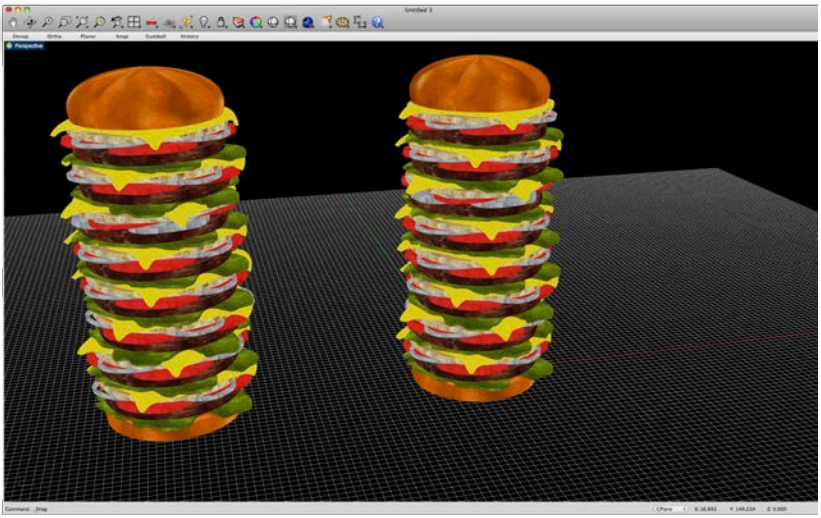

Figure 28 Though burger does not instantly resemble the visual system, however, the system was used to inform how the cheese or lettuce or other elements in the burger bend or deform based on the system.

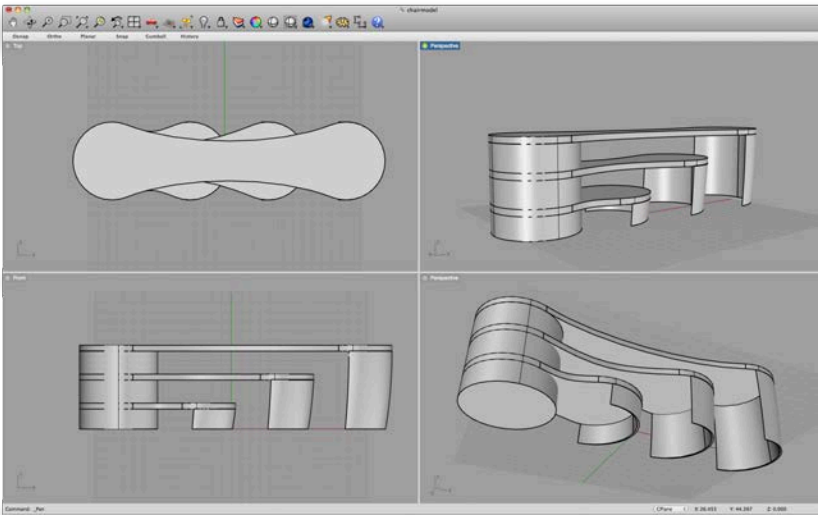

Figure 29 A rotating chair based on the visual system, but since the scale is too large for 3d printing, the prototype is considered for technical issues in woodworking and cutting.

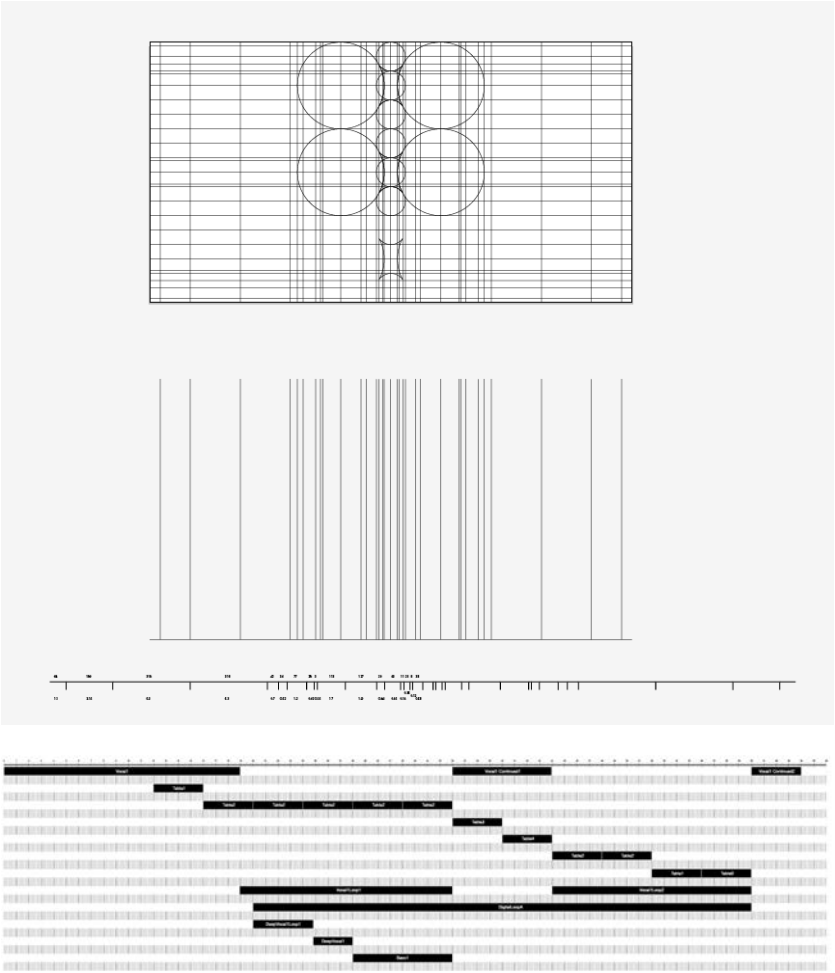

Figure 30 The system in project Nulla is also used to construct musical compositions and soundtracks that will be used in the film. Also the system informs and guides editing process. The intersections between the circles create a pattern of spaced lines proportional to the circle sizes which are relative to each other. This is an interesting way to look at time when composing or editing music or film.

5.2 FILM

This is the final component of the project. All the objects that were designed using the process were also used to guide a narrative structure for the film, the composition of musical soundtracks.

1.1 is an Arabic Science Fiction film that uses speculative designs as means to critique/ question cultural niches in a pseudo-contemporary Middle Eastern society. The number "0" inspired this title.

I'm interested in the contrast between religion and science in middle eastern societies today. There is always a dilemma in compromising religion and science to a meaningful way of life, specially in religious/ conservative cultures. After the oil boom in the gulf region which lead to the sudden wealth to its conservative residents, and the rapid economical and industrial development, the region offers much room for globalization and technological advancement. But this progress cannot be maintained without willingness to change.These two compromised things (religion and science) have inspired the title 1.1

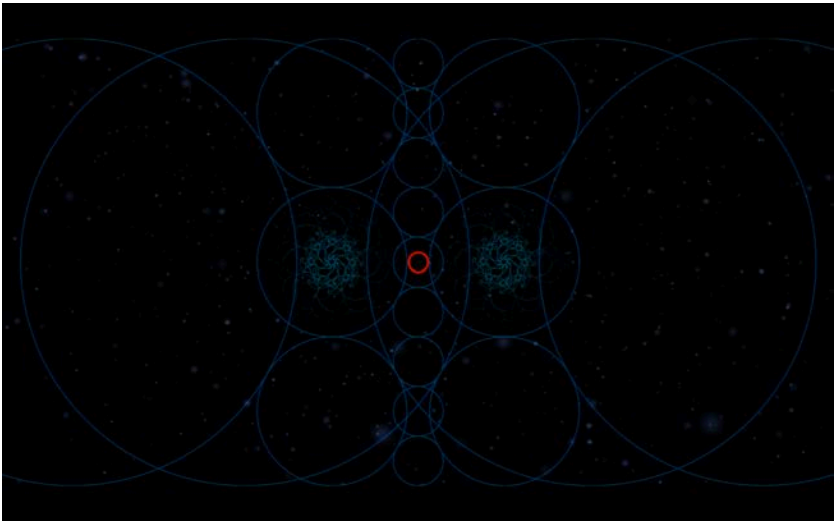

Figure 31 The beginning of the film title sequence with the visual system developed in project Nulla

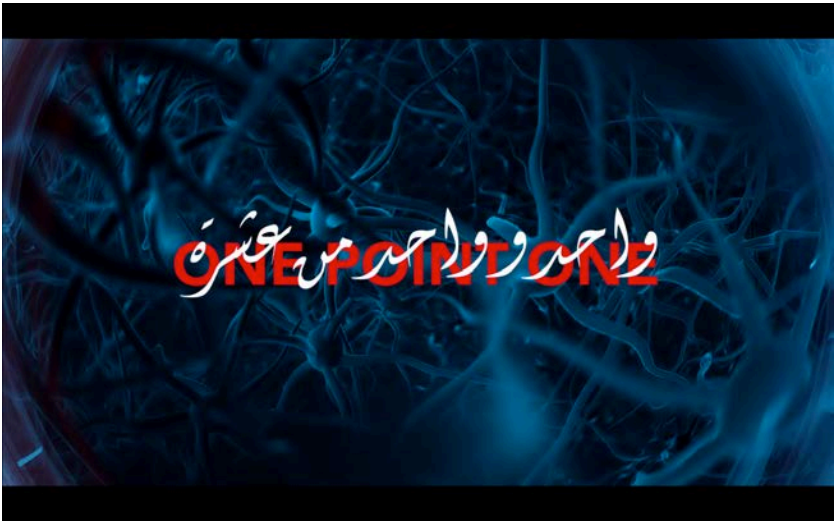

Figure 32 The film title for this research "One Point One" (An arabic science fiction film)

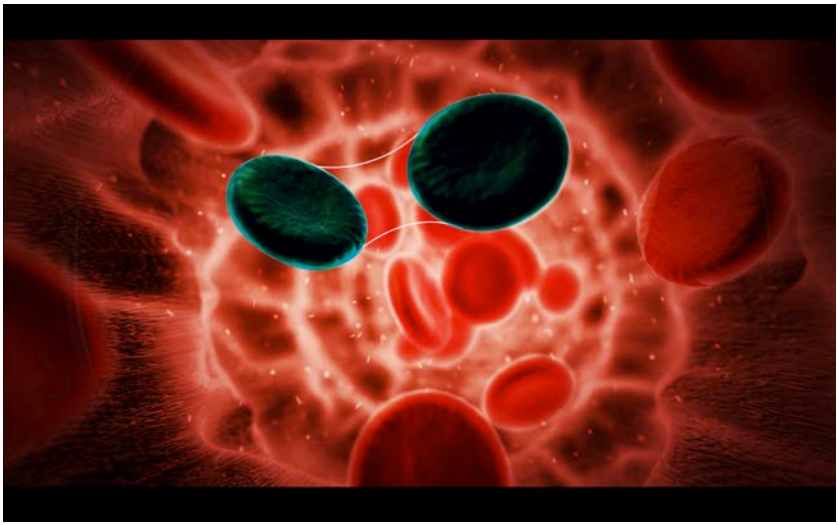

Figure 33 A snap shot of the visual system integrated in a blood stream sequence. (In the context of the movie this deformations and distortions are influence from the drug prototype in the film.

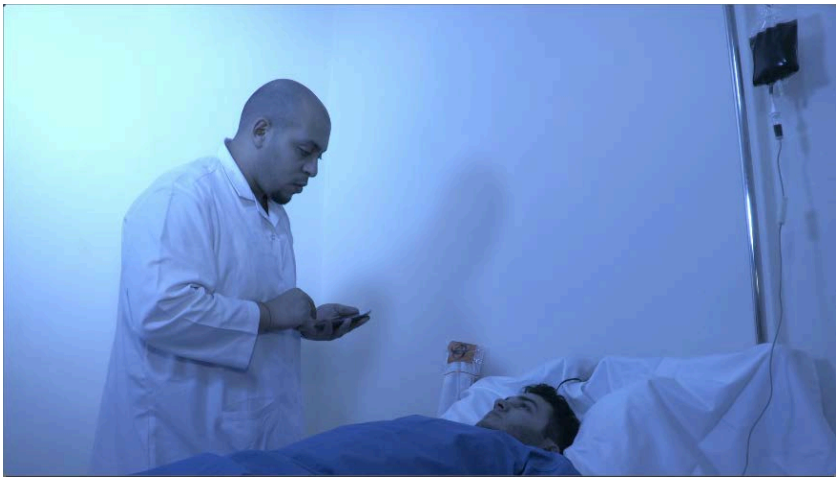

Figure 34 Snapshot of film set up

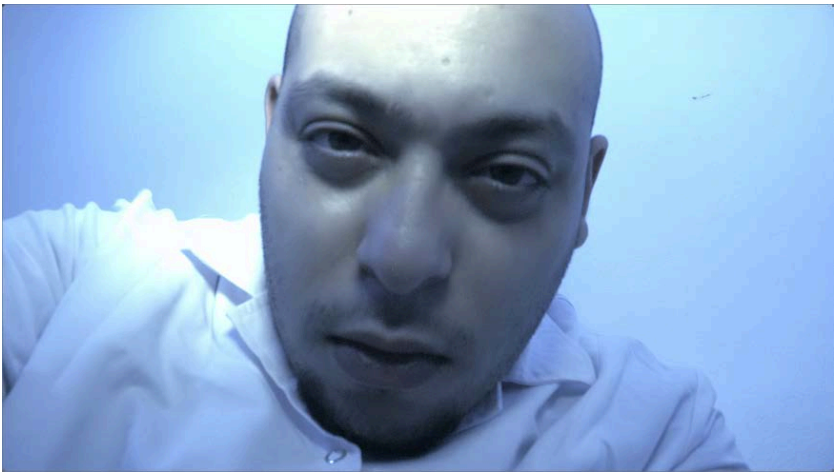

Figure 35 The doctor character is the one carries on a series of tests on the patient using the prototypes developed in this research

Figure 36 The patient character is the one that experiences the tests and prototypes developed in this research

Figure 37 Doctor carrying on a test on the patient using the drug prototype (an object containing a reserve of various chemicals which are transferred to the bloodstream through an interactive interface. The effect could be physical or emotional depending on the users input.) This prototype could be looked at as an interactive drug that influences our emotions, thought patterns and experiences.

Figure 38 The patient's experience of the situation

Figure 39 Apart from the prototypes developed in this research, many other prototypes where created for the film in order to contextualize the environment.

Figure 40 Snapshot of the patient connected to a regular hospital instrument

To break it down, the 1.0 (before the "0″) is for religion, it signifies faith in the transcendent. Through faith in this entity, people develop moral obligation and ideological consistency. In today's rapidly changing world, many are in a state of ambivalence and confusion with regards to their morality and life choices (moral advice and life coaching?)

The 0.1 (after the "0″) is for science, the zero signifies nothing. The zero in this context is not literally the number zero, but the non-existent, invisible or underdeveloped entity which opens room for technological and scientific speculations that potentially can suspend our disbelief. (future and technology forecasting?)

Both these entities have one thing in common, which is faith in the intangible and the unknown. The former ascribes faith to an invisible "something" that drives our "emotional" choices while the latter ascribes faith to an invisible "something else" that drives our "informed" choices.They are not real yet that makes them even more real. Or as popular philosophers might call it "The Reality Of The Virtual". In the middle east, many inherit the faith in the invisible "something", but later in their life they have to cope with the invisible "something else".

This science fiction film does not intend to preach a message or enforce an ideological agenda. Instead, it uses different rhetorical strategies through film and design to question/ critique the current things as they are, particularly in the middle east. The film does not intend to have a serious tone. It could be looked at as a black comedy or a comedy depending on your views and tastes.

Writing, designing, editing, and composing, were specifically developed by a geometric system designed for the sole purpose of making this film. That being said, the film has an unconventional visual and formal consistency.

5.3 EXHIBITION

The Following are images of the construction plans for the exhibition. The plan is subject to change depending on the limitations of the facilities. More information about the final exhibition and additional information will be available on the film's official website: (www.1dot1.net)

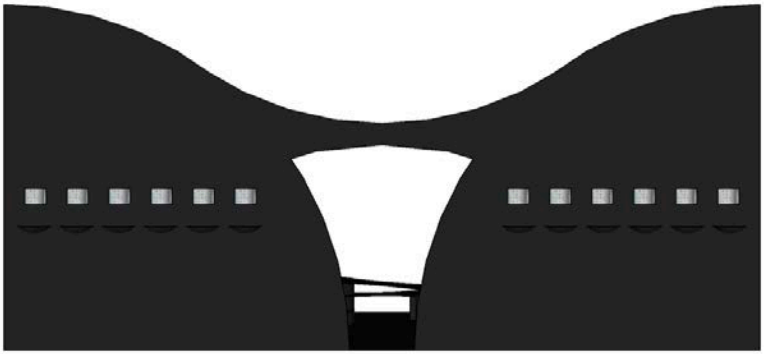

Figure 41 Early Construction plan of exhibition

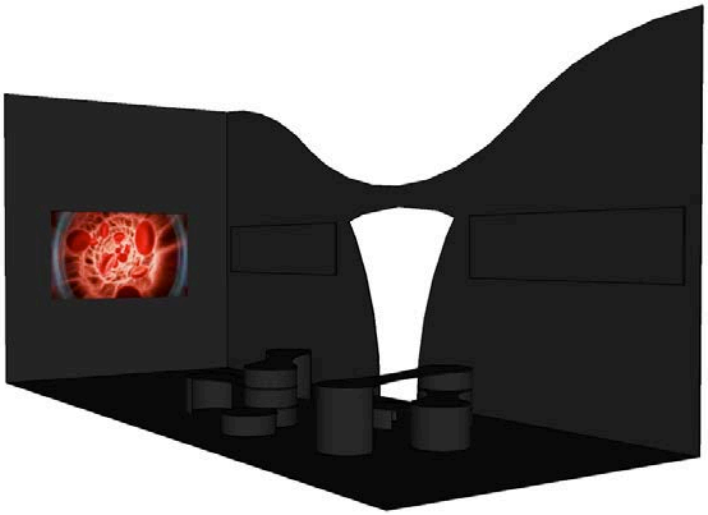

Figure 42 Exhibition interior, using the visual system to create the partition, the door and the chair.

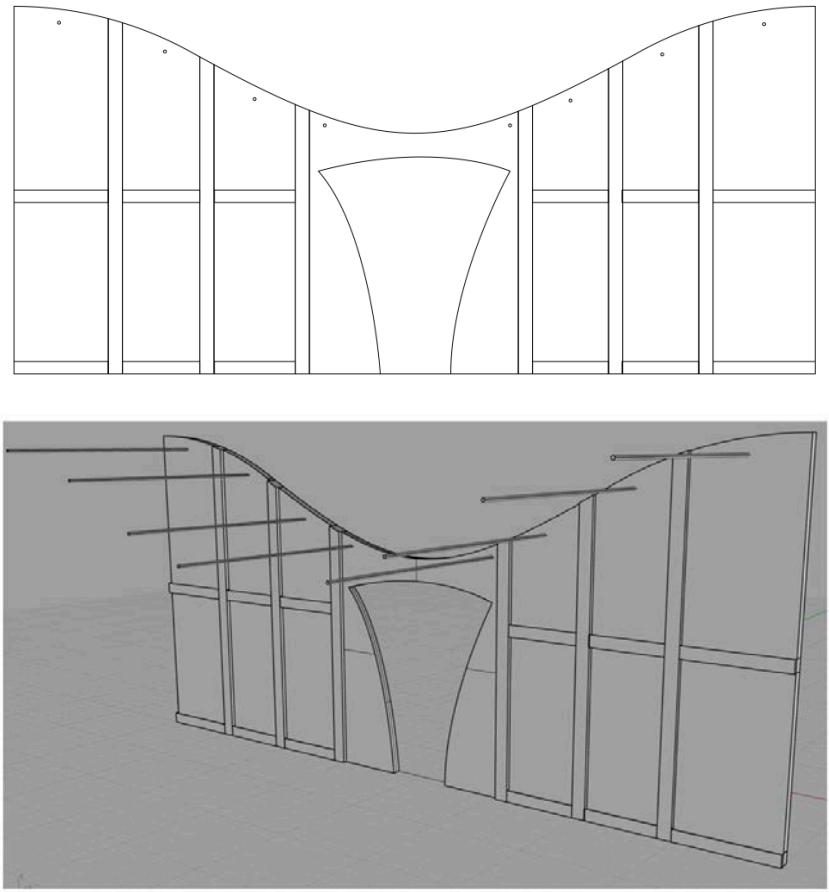

Figure 43 Technical plan for the exhibition construction

6 FINAL REMARKS

The work in this research presented a variety of possibilities for using psychoanalytic theory and visual structures to approach speculative design and fiction, it further explores an application to a multitude of disciplines, which range from graphic design, product design, digital fabrication, fashion design, Interior design, architecture, filmmaking and music composing.

This research is a small step towards understanding conceptualization and storytelling as structural processes through using existing structures from disciplines outside a designers' main field of practice. The work particularly elaborates on psychoanalytic structures that are used to objectively analyze a human condition.

As a designer this research aids in approaching problem solving and problem seeking differently through investigating non-existent, uncommon problems or fictional problems. Through this process the means do not lead to a desired end that is influenced by mass media or the status quo. Instead it leads to new or unfamiliar ends, which could act as triggers discourse and debate on the future state of the art.

GLOSSARY

Culture Jamming:
Anti-Consumerist social movement to subvert media culture and its mainstream cultural Institutions.

Diegesis:
A narrative or a plot, typically in a movie.

Ideology:
A system of ideas and ideals.

Nulla:
Greek for the number Zero, which means “nothing”.

Narratology:
The theory and the study of narrative.

Semiotics:
The theory and the study of signs.

Mise-en-scène:
An expression used to describe the design aspects of a theatre or film production, which means "visual theme".

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APPENDIX 1: EXPERIMENTAL VISUALIZATIONS

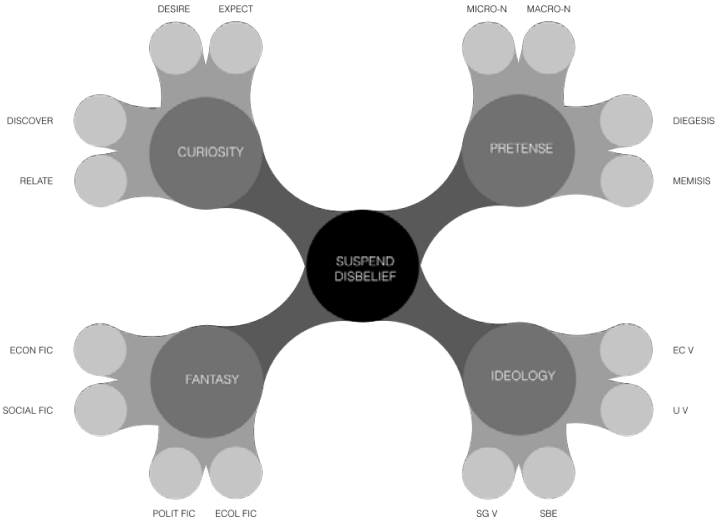

Figure 44 The visual system in project Nulla was also used to visualize theory and research based on or related to Lacan's triad

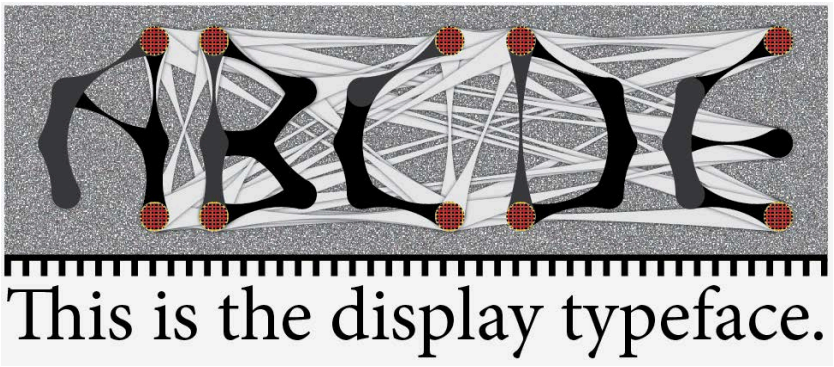

Figure 45 Experimenting with visualizing type to understand the complex possibilities of the visual system

Figure 46 (USE) Visualizations of Baudrillard's consumer need values in relationship to design and psychoanalysis.

Figure 47 (Economic Exchange)

Figure 48 (Sign Exchange)

Figure 49 (Symbolic Exchange)

APPENDIX 2: QUESTIONS ASKED DURING THE PROCESS

The writings in this section might be in conflict with the theory discussed, but it was the initial project where some of the explorations lead to the following projects. Hence, this section should be read as initial questions and reflections on approaching the first project. The following is an attempt at a process for creating an object through answering questions, subjectively reinterpreting information:

1- NARRATIVE:

Original:

Gown removed carelessly. Head, less so.

- Joss Whedon

Alteration:

Groin removed carelessly. Head, less so.

Interpretation of Micro-Narrative: From an individual perspective, the brain is our most valuable organ, it's what makes us human, but with the evolution of technology, the metaphysical became more valuable than the physical. We don't mind physically altering our bodies as long as we have the brain that gives us the mental capacity to enjoy these alterations and create new emotional attachments.

Interpretation of Macro-Narrative: From a collective perspective, since a very long time, humans have used trading as a method to get what they need from others, now that our needs have changed from a universal basic survival need to a subjective need for satisfaction, trading became a poetic concept rather than a material one. (i.e. removing my groin in exchange for enjoying a bike ride with my friends)

2- TECHNOLOGIES:

A) *Cello Fortress (Instrument as Interface):"I play cello and my music is analyzed by the game [via a microphone]," he explains to Gamasutra. "The game has certain rules for what controls what, and can recognize the difference between aggressive music, slow melodies, high or low notes, those kinds of things."*

B) *Fusing Nerves with Fake Limbs:A replacement limb that moves, feels and responds just like flesh and blood. It's the holy grail of prosthetics research. The Pentagon's invested millions to make it happen. But it's been elusive — until, quite possibly, now. http://www.wired.com/dangerroom/2012/02/nerve-prosthetics/*

A+B) *Nerve influenced prosthetic instruments: First an instrument is defined as a*

tool, not necessarily a musical instrument. Second, what is considered music may vary from different individual tastes; some might consider it music and others might consider it noise. So it's better to identify it as sound, rather than music. Third, a prosthetic limb is defined as an artificial body part, but that should not limit us to consider it as an extra body part rather than a replacement. Given the concerns above I'm proposing an additional limb controlled through our nerves to manipulate information such as sound. Or in other play of words receive sound information (based on reason).

Example:

Prosthetic toothbrush that changes information depending on the finger it's connected to. (i.e radio channels)

Trade-off: You have only four channels to choose and install on your finger tips (or limited number of limbs). What are your four channels of "sound" information? (i.e. Philosophy Podcast, New York Times, National Geographic, Electronic Music)

Macro-Narrative: In the future, with overwhelming amount of technological developments we're not interested in spending time to listen to the news, as it relatively became a less fulfilling and time wasting behavior.

Micro-Narrative: An individual is no longer interested in receiving external knowledge if it's not integrated in his relevant daily routine.

3- ANSWERING QUESTIONS:

What are the implications of the mass adoption of the technology?

People will no longer be interested in listening to the radio for the sake of listening but rather the utility value of the radio won't be sufficient enough unless it's integrated with other values that are collectively seen as more fulfilling. It's a new form of conspicuous consumption, where what's clearly visible as a value unit is replaced by what's clearly visible as an ideology that encompasses collective units of value. In this case, the ideology is "Consume as much as you're given, in whatever way you can"

What is the worst thing that could go wrong and would it affect people and locations in the story?

Trying to be efficient in this lifestyle while feeding your arbitrary selfish needs will result in organizing what you think you need to fit in your life "efficiently". Products in this world are begging you to use them and they compromise their identity to function in the context of your life style. Our strive for order and perfection in this chaos will cause us to be more bigoted with our values and needs. The world will become more needy, selfish and unsatisfied with limitations. Though limitations will always be there, we will aggressively strive for more. The location here

would be our homes were we selfishly enjoy all the things that are possible at our finger tips.

What is the best thing that could happen and how would it better the lives of the people and locations of the story?

Having this organic merging of technologies in different contexts can raise our awareness of our surroundings as the objects of utility and value are deconstructed to serve us differently. The location would be the world and the symbiosis between it's objects.

If this technology was aim an average home, how would it actually work?

It would work in the bathroom while we're brushing our teeth, but the routine of brushing teeth would change as we can get a more fulfilling experience through brushing our teeth and receiving information. At these moments where we would be starring at the ceiling or circling around the living room, we could brush our teeth and listen to the radio, the brushing becomes a second nature and we subconsciously reflect on the information we're listening to rather than our image in the mirror, or maybe both

What is the effect that this new science or technology might have on the daily lives, governments and systems in the story?

Our daily lives will become even more saturated with information than before.

Governments and systems will use this advantage to inject their agendas in our daily routines.

Are the changes believable for the virtual world and stay within the constraints of science?

It is believable but not yet achievable, nerve infused prosthetic instruments are still in the development stage, but are in very rapid progress. Feasibility can be an issue, as a prosthetic limb does not equate to a tooth brush economically. Interaction through sound is currently used today and there is nothing ambiguous about achieving it.

This idea of receiving sound brings up this technology to the table:

Bat ears could inspire new sensing technology for robots

In man-made sonar and radar systems, sidelobes are commonly regarded as nuisances that need to be suppressed. In bats, they seem to be prominent features that are enhanced by the shapes of the ears. For example, in the big brown bat, a projection on the ear called the tragus seems to be responsible for the creation of sidelobes. The tragus is a common element of the visible portion of the mammalian ear; in humans, it points rearward and is at the front edge of the outer ear. In bats, the tragus is often a comparatively large structure that ranges in shape from broad mushroom-like to long lancet-like versions. "The greater prominence of the tragus in bats may be seen as an indication of the importance of this structure and the sidelobes it produces to biosonar function," says Mueller,

adding, "We found that a small ridge on the lower inner wall of the outer ear makes a big difference."

Maybe the tooth brush has an bat-ear shaped sound receiver that uses the brushing sound as a trigger to increase the channel volume.

How have the virtual world changed?

It changed in the way we interact with each other and relate to objects. A toothbrush is not only a toothbrush, but something more and the tempted to want that "something more" in every object. It becomes an expectation rather than a charming surprise.

How have the people, society, systems changed?

Society became influenced by the objects they use, with the mentality of expecting more and that translated into how we deal with people. Having the expectation to get something more out of them. Everyone is aspiring to be more than what they are in an unhealthy manner. Along the same lines, systems convince us that have more (unusual) expectations from ourselves for the "wellbeing" of the society is important to our development as human beings. The system makes us feel guilty for not having a symbiosis of disciplines in the same way that our surrounding objects have. Things like multidisciplinary, interdisciplinary, transdisciplinary are the norm for being, rather than an innovative approach to creativity.

What could be done differently?

Instead of object being individually influenced they could be collectively influenced through people from different places.

What cautions do you need to pay attention to?

We need to be cautious of the implications that such a symbiosis of technology might entail. As what we do and what we interact with eventually translates to who we are and what we value.

What fears were unfounded?

Fear of being empty and bored.

Having a channel triggered by a different finger can be counterintuitive to the brushing process. Instead, there will be a sensitive nerve tension detector that is placed on one finger and changes channels when we close one of the remaining three fingers, the fourth channel will be when the fingers are all open.

Since the object looks like a finger with a bat ear coming out of it, it also resembles a candle. The brush will be connected to a porous beam fixed horizontally to the wall, which resembles a shelve, when it's there, the bat ear lights up and resembles a candle flame. Once the brush is removed, the dark dimly lit bathroom automatically switches on light. Now you can slip the object on your finger and start brushing. The higher the brushing sound, the higher the volume of the sound information. Channels could be switched by closing the fingers as explained earlier. You get feedback through

tactility, it's a completely mechanical process when related to nerves and cognition.

They provide a clue as a candle and as a toothbrush that is slipped on the finger, but the candle does not provide an affordance for understanding that it is also a toothbrush. However, the nature of this product is in a narrative not a shopping mall.

The first action is effective in transforming the dimly lit bathroom space into a well lit bathroom that prepares you to brush your teeth. It's like the opening scene of using the brush. A false coincidence would be taking away the brush in order to light up the bathroom and use the toilet, while the toilet works from triggering the toilet seat. Maybe it could be a bathroom where the light is triggered through different affordances. led toilet seat, led fossil knob…etc. But that will be another project as each element in the bathroom should be considered thoroughly.

The conceptual model does not clarify the complications of the mapping, because the brush is connected to the bathroom and that makes it an entity of the bathroom object. In order for it to be correctly mapped, all the elements in the bathroom should be considered and how the object would function outside the bathroom (i.e. brushing teeth in the living room while bathroom light is still open). Maybe when you get further from bathroom an embedded proximity sensor in the brush tells the light to switch off.

The actions in the context of the toothbrush object can be mapped intuitively, through brushing speed:volume ratio. But the channel changing can be a bit uncomfortable if a finger is closed for too long in order to listen to the channel. Your favorite channel, could be the fourth channel, where all fingers are open, second favorite could be when all three fingers are closed and third favorite and fourth favorite depends on how comfortable you are in closing either fingers. Or All that could be thrown away and the changing of channels could be done by opening and closing the four fingers. Fingers open, close fingers, channel 1 starts, and so on. This will also emphasize on the nerve tension on the index brushing finger. Your favorite channels could be changed through your toothbrush account on the internet. The brush, the finger shape are easy to define. However, the bat ear can be a difficult memory cue, but it can function as an aesthetic for the object.

The object activates the memory of a tooth brush and the memory of a candle.
However, arbitrarily, the memory of taking off the candle can vary from culture to culture. Taking of the candle might be a symbolic ritual that relates to religion. Maybe the bathroom candle lights up when we take something of the fridge assuming that you ate something, the bathroom slowly has this subtle atmosphere of light to tell you that you need to brush your teeth. The memory of light from our experiences can teaches how late we are in

brushing our teeth. Maybe the light is dimly lit dark blue when we just turn on the fridge and gradually turns bright orange in an hour if we didn't brush our teeth. When brushing our teeth the memory of doing something harder, creates more impact, (such as stepping on the breaks), in this case it's brushing harder to raise the volume of the sound. Changing channels by closing hands our memory of gestures is relevant to the mechanism of changing the channel.

We perceive the object as something that is living in harmony with its context, that functions differently depending on the interaction. We interpret the object as part of the house, not an addition. We evaluate the object based on the information it provides through the channels of sound information that we prefer and how this information is mediated through our daily routine.

The goal can be either cleaning teeth or listening to the channels. However the intention can vary depending on the motivation. The user can clean teeth without wanting to listen, or listen without wanting to clean teeth, or do both or do nothing. This creates a dilemma in intentions and needs, though the dilemma is not very critical, the person adapts to this object and rethinks his priorities. If I want to listen to a particular program at 4:00 PM, I would plan to eat at 3:00 or 3:30 PM so I would go brush my teeth at 4:00 and listen to it. But how is that different than a treadmill with a TV infront of it? The difference is

that the treadmill does not influence other objects surrounding it. It's an isolated object set for a specific purpose and function whether the TV is there or not. On the other hand, the channels on the tooth brush do compliment the function of the toothbrush, as the brushing speed and hand gestures influence the object, whereas the TV does not influence the treadmill. It's an influence from object to object rather than from object to person, like a machine to machine interaction.

When objects are semantically connected together then we see a bigger narrative in how we interact with the object. Not object to human, but objects to human. Just like an individual to individual interaction varies from the cultural background and context each individual is coming from. The sound that's coming from the individual in this narrative context is a diegetic sound, it's not a commentary or background music. Similarly, the sound that's coming from the toothbrush is also diegetic as the context of the narrative is "what the brush is saying to you" rather than what's playing while you're brushing your teeth. Because you have preset the channels you're interested in and you have some form of expectation of the theme of information that is coming to you, though sometimes you might be surprised, it will probably be a surprise that you'd expect from that theme. Like how we function in society with

our preconceived notions of right and wrong, stereotypes and expectations from people.

The narrative that objects create will be based on the individual's condition. In an existential sense, the relationships between objects and how they interact with us varies from one person to another. When Hemingway wrote "For sale: baby shoes, never worn." This narrative can be at least interpreted in four different ways. The baby could be dead, the baby could have got his feet chopped off, the shoes could be a gift from a confused grandmother, the parents might want to sell it to make more money, and so on. The micro-narrative here is that thing do go as we expect them to. Along the same line, the "For sale" or the "set up" element is the toothbrush object, the "baby shoes" or the subject/theme element is the information provided by the channels, and the "never worn" element or the tragedy/conflict/ dilemma element in the original story was this object "baby shoes" that lost most of it's need values. The climax and the catastrophe in the story is then interpreted subjectively by the individual.

In the toothbrush scenario, the dilemma is between interests and rituals, brushing your teeth is a ritual while listening to the radio is an interest. In many cases the interests overlap with the rituals; for example I'm interested in living a healthy lifestyle and I do so by maintaining my ritual of going to the gym, eating specific food ,or I'm interested in being a writer and I do so by writing a

thousand words everyday and so on. The two elements are in harmony when they overlap rather than forced, this overlap does not create a dilemma, but it can create an inconvenience. In the toothbrush example, the interest and the ritual are not in harmony, it can create an inconvenience as the ritual does not fulfill the interest, this inconvenience is overshadowed by the correlation of different objects in the house (i.e. candle in brush, lights up when fridge is open), this correlation with the context creates the dilema (i.e. maintaining the harmony of the objects or orchestrating the actions and reactions in a particular way to do what you want to do, a dilemma between interests in things and rituals in managing them).

For the purpose of this sub project, I need to find a way to create micro-dilemma given only the context of using the toothbrush. Here I need to find a more literal metaphor from popular culture regarding teeth and connected to the bigger metaphor.

"I told my dentist my teeth are going yellow. he told me to wear a brown tie." ~ Rodney Dangerfield

We can see from this popular quote, that we have a tendency to deceive ourselves and others to make ourself enjoy what we have. Though this is an irony not a deception, the "white lie" that functions as a joke, would not be funny if we could not relate to it.

The irony in brushing teeth is that it's similar to cleaning a toilet or polishing the shoes; some people actually use old tooth brushes to clean their toilets or dust the bottom of their shoes. The irony in listening to the radio is that we listen to it while we're driving not because we genuinely want to listen to it, but because we want some sound in the background. Also the irony is in its relation to current technologies. We're not interested in listening to limited radio channels when we have our itunes subscription to the things we're interested in. We can consider this untrue, because we can connect our iphones to the car and listen to what we want, but we don't do so in order to drive or to listen to music, they both don't rely on each other to function. In most of these cases, irony is about relationships and connections between these objects that mock themselves by ignorantly trying to be something else.

Based on the quote above, a possible cue would be the bat ear turning from yellow to white indicating whether you need to brush more or not. The irony here is that we became so dependent on technology that we rely on what the machine tells us rather than ourselves. The systems and governments might manipulate the yellowness of the bat ear to stay longer to make us listen more to is said. It can be a scene where someone is brushing their teeth in front of the mirror, he sees that they're white, but continues to brush because the ear is still glowing yellow. Going back to the "raido" or the

sound information (podcast, music playlist,..etc), the irony here is how we're trying to make one thing do many things (i.e iphone applications and accessories, 2D program with 3D features, tables with chairs attached to them…etc). This trend pushes us to compromise quality for quantity and variety. In the toothbrush scenario, let's say when I'm trying to brush a cavity deep inside my mouth, my fingers would be forced to slightly move to adapt to the location I'm brushing, but at the same time, this movement is distorted due to nerve sensors interpretation. What if my hand had a sudden shake or a twitch, how would that be translated or mistranslated by the tooth brush? The compromise creates room for unusual, often unsatisfactory, and sometimes interesting behavior.

The Intention here is conspicuous consumption. The user uses the product not because of it's functional value but because of it's promiscuous array of features and values. The action becomes irrelevant to the purpose, one could browse through his facebook page without needing to do so, or fold a small piece of paper without consciously deciding to. Similarly, brushing the teeth becomes an action that is secondary to the sound output, the sound becomes a distraction, and the value becomes the idea of using an integrated variety of technology, not the practical implications of it. This can be compared to Slavoj Zizek's talk on need values, he gives the example of

Cocacola, where we can never have enough of "it", and this can be shown through the Diet Cola, where the need value is diminished. The diet Cola does not have a nutritional value which is sugar, and it does not have a taste value which is the caffeine "we almost drink nothing in the guise of something". In light of this the expectation is always more (more channels, more features, more links, more frustrations). The intent of this project is to question cultural constraints and standardization. However, the project does borrow some standard ideas, like a tooth brush in a bathroom, also the finger tooth brush is a commercial product. There is enough precedence to communicate the function of the object in a semi-universal context, since some people don't brush their teeth or have access to a radio.

APPENDIX 3: MORE INFORMATION ON THE FILM

I've used an online fundraising platform to raise funds for the film (www.indiegogo.com/arab). During the month of May the film I will reach over 50 film festivals around Europe and the United States. You can also find more information on the future festivals the film will be screened on (www.1dot1.net)

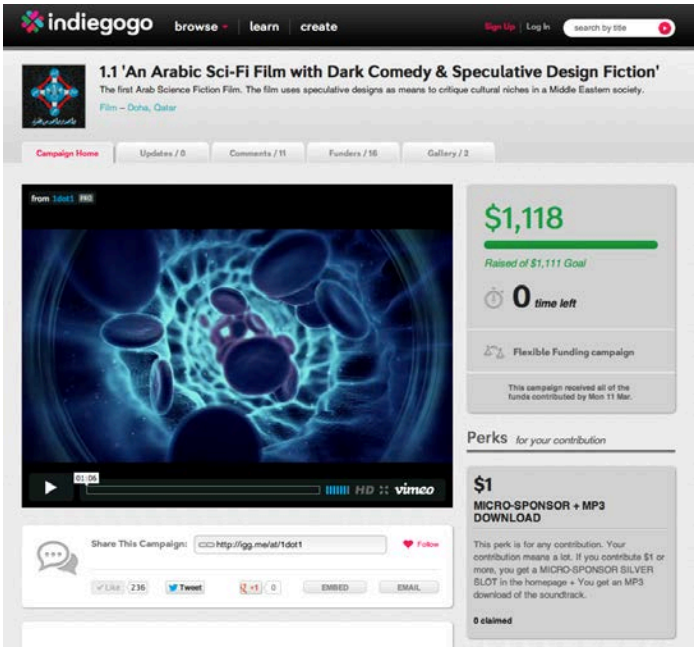

Figure 50 Indiegogo campaign started for the film to raise funds for film festival distribution.